

Truth About China Lumena New Materials (00067.HK)

April 1, 2014

The Basics	
Ticker:	HK:00067
Recent Price:	HK\$1.25
Market Cap:	HK\$7.0bn

Emerson Analytics Estimates
<i>Delisting</i>

Our research and investigations (which involved extensive surveillance of Lumena's plant facilities with video recordings at various locations) show that Lumena's actual revenue in 2012 was probably only Rmb631m, meaning the company exaggerated its revenue by about seven times to a claimed Rmb4.51bn. Lumena probably lost Rmb372m rather than earned Rmb1,394m in 2012.

- Lumena's 250,000-ton medical thenardite output is absurdly high because it means the average Chinese consumes more than 30 doses of its product for laxative purpose per year. Our investigation shows that the Muma plant is probably making less than 1,000 tons of medical thenardite a year while Dahongshan has ceased production of medical thenardite a few years ago;
- Lumena's claim that "specialty" thenardite sells at two to three times of standard thenardite prices is a big lie. Our attempt to purchase "specialty" thenardite directly from Lumena's Guangji facility was met by the revelation that except for a small amount of animal feed-grade thenardite, the company does not produce any other types of "specialty" thenardite;
- The Yuegou thenardite facility is supposed to produce 250,000 tons of "specialty" thenardite a year but shows no sign of any ongoing operations and apparently has never been in business. We also estimate that the Guangji plant with a capacity of purportedly one million tons of "specialty" thenardite is actually running at less than 10% utilisation;
- Based on our calculations regarding the use of raw materials, traffic counts, and conversations with technicians, we estimate that Lumena's PPS resin output is less than 5,000 tons, only one-fifth of that claimed by the company for 2012;
- Lumena claims that its biggest selling product (44% of total sales), PPS compounds, achieved sales of nearly Rmb2bn on a volume of 27,608 tons. Our investigations show that the actual annual production is about 1,200 ton, or 4% of the reported number.

With exaggerated sales and profit, the sanctity of Lumena's balance sheet is naturally questionable.

Truth About Lumena New Materials (00067.HK)

- Even before beginning construction of its new PPS resin plant in May 2012 and its new PPS fiber plant in April 2013, the company had booked Rmb1.95bn of “assets under construction” on its 2011 balance sheet;
- Lumena’s reported net equities of Rmb14.63bn at the end of 2012 consisted of following bogus items. After adjusting these items, the company’s net tangible assets are probably only Rmb23.8bn or Rmb0.43 per share, just 16.3% of reported book value.
- After repeatedly delaying the completion of its new PPS plants, the company claimed Rmb3.66bn of “assets under construction” at the end of 2012. In fact there are only several vacant building (no achine inside) worth Rmb180m at end-2013. This results in phantom assets of Rmb3.48bn;
- Rmb0.68bn of intangible assets such as goodwill could not be justified if the underlying assets were not performing; and
- Based on the dismal interest income earned, we estimate that the company’s actual cash balance was more like Rmb1.30bn rather than Rmb3.30bn reported at the end of 2012.

Truth About Lumena New Materials (00067.HK)

Table of Contents

Part 1. Investigation into thenardite production.....	6
1.1. <i>Medical thenardite output is absurdly high</i>	7
1.1.1. Muma facility’s real output only a fraction of reported numbers	8
1.1.2. The Dahongshan facility has no medical thenardite production	9
1.2. <i>“Specialty” thenardite is a big lie</i>	12
1.2.1. Salesman said no “specialty” thenardite was produced.....	13
1.2.2. Dahongshan’s price is higher than Guangji’s, rather than vice versa.....	14
1.2.3. Sales receipt shows Guangji does not make “specialty” thenardite	16
1.3. <i>Industrial thenardite output also exaggerated</i>	16
1.3.1. Guangji output not even 10% of Lumena’s claim	16
1.3.2. Yuegou facility has never produced anything	17
Part 2. Investigation into PPS Production	20
2.1. <i>PPS resin actual output is less than 20% of claimed amount</i>	21
2.1.1. Raw material usage shows PPS resin output way below published data.....	21
2.1.2. Deyang Materials engineer puts output at 5,000-6,000 tons	23
2.1.3. Video recording of Deyang Materials traffic	24
2.2. <i>PPS compounds said to account for 44% of total revenue but actual output only 4% of reported level</i>	28
2.2.1. Where is the 30,000-ton PPS compounds capacity?	28
2.2.2. The key extrusion machine – TSE-65A	30
2.2.3. Estimating PPS compounds output	31
2.3. <i>Our estimates of PPS resin and final products actual output</i>	32
Part 3. Exaggerated Profitability and Asset Black Holes	33
3.1. <i>Exaggerated profitability</i>	33
3.1.1. Revenue inflated by 7x.....	33
3.1.2. Exceptionally high gross margins	34
3.1.3. Lumena probably lost Rmb372m rather than earned Rmb1,394m.....	35
3.2. <i>Asset black holes</i>	36
3.2.1. What “Assets under Construction”?	36
3.2.2. Lumena’s reported cash balances are bogus.....	43
3.2.3. Goodwill and other intangible assets unjustified.....	43
3.2.4. Best estimates of net tangible assets.....	43

Truth About Lumena New Materials (00067.HK)

List of Evidence, Estimates and Company Information

Evidence 1 – Audio clip of Muma facility plant manager on medical thenardite output (only share with SFC)	8
Evidence 2 – Access road Dahongshan medical plant	9
Evidence 3 – Main gate of Dahongshan medical plant	10
Evidence 4 – Lock on main gate of Dahongshan medical plant	10
Evidence 5 – Video clip of visit to Dahongshan medical thenardite plant	11
Evidence 6 – Audio clip of Dahongshan villager on medical thenardite output (only share with SFC)	11
Evidence 7 – Audio clip of Chuanmei sales executive on “specialty” thenardite	13
Evidence 8 – Audio clip of Chuanmei sales executive on thenardite prices	14
Evidence 9 – Sales receipt of Guangji thenardite (only share with SFC)	15
Evidence 10 – Trucks loading thenardite onto container box	16
Evidence 11 – Yuegou facility main gate with corn drying under the sun	17
Evidence 12 – Video clip of farmer nearby Yuegou facility (only share with SFC)	18
Evidence 13 – Audio clip of another farmer nearby Yuegou facility (only share with SFC)	20
Evidence 14 – PPS chemical reactions formula	21
Evidence 15 – Shaanxi Fuhua’s sodium sulfide	21
Evidence 16 – Audio clip of conversation with Deyang companies merchandising department	22
Evidence 17 – Audio clip of Deyang Materials engineers (only share with SFC)	23
Evidence 18 – Typical truck serving Deyang Materials	24
Evidence 19 – Video clip of Deyang Materials truck movement (only share with SFC)	25
Evidence 20 – The truck serving Deyang Materials and Deyang Chemical	26
Evidence 21 – Satellite map of Haton Garden	29
Evidence 22 – Location of Deyang Chemical’s PPS facilities	29
Evidence 23 – Location of PPS compounds plant	30
Evidence 24 – Lumena chief engineer Gou’s article	30
Evidence 25 – TSE-65A at Deyang Chemical	31
Evidence 26 – TSE-65A specifications	31
Evidence 27 – Gross margins of thenardite manufacturers	34
Evidence 28 – Gross margins of engineering plastics manufacturers	35
Evidence 29 – Lumena’s new PPS resin plant on a huge plot of land	37
Evidence 30 – Billboard outside Lumena’s new PPS resin plant	38
Evidence 31 – Inside Lumena’s new PPS resin plant	39
Evidence 32 – Email to Lumena IR dated November 27, 2013	39
Evidence 33 – Construction permit inside Lumena’s new PPS fiber plant	40
Evidence 34 – Billboard outside Lumena’s new PPS fiber plant	41
Evidence 35 – Audio clip of contractor on Lumena’s new PPS resin plant (only share with SFC)	42
Estimate 1 – Estimated PPS final product breakdown	32
Estimate 2 – Revenue estimate	33
Estimate 3 – Estimated recurring profit	36
Estimate 4 – Net tangible assets estimate	43
Company Information 1 – Thenardite facilities overview	6
Company Information 2 – Lumena’s claim of annual output at its four plants	6
Company Information 3 – Revenue and sales volume of thenardite	6
Company Information 4 – Chuanmei’s description of its medical thenardite	7
Company Information 5 – Sales volume and output of medical thenardite	9
Company Information 6 – Thenardite Type	12
Company Information 7 – Chuanmei “specialty” thenardite sales contact on its website	13
Company Information 8 – Lumena PPS production capacity in 2010	20
Company Information 9 – Output and sales volume of PPS resin and end products	20
Company Information 10 – Joint website of Deyang Materials and Deyang Chemical	22
Company Information 11 – PPS fiber production process	27
Company Information 12 – Location of Deyang Chemical	28
Company Information 13 – Lumena disclosures on PPS expansions	37
Company Information 14 – Note 22 to the accounts	41

Truth About Lumena New Materials (00067.HK)

Disclaimer

We are a group of seasoned equities analysts with many years of experience in the research of economic and political trends as well as individual stocks around the world. With background in various international investment banks, we have followed the development of the Chinese equities market right from day one.

We are determined to expose as much of the fraud in the Chinese stock market as we can. The most widespread and serious fraud is probably that undertaken by listed companies, in fabricating non-existent businesses and stealing shareholders money, among other tricks.

In exposing these crimes we challenge the listed companies to prove the integrity of their announcements and financial statements. The listed companies, of course, want everybody to believe that their announcements and financial statements are true. Their auditors, employees, independent directors, lawyers, shareholders and even the general public all hope that these announcements and financial statements are true.

We have made our best effort to ascertain that everything we say in this report is accurate. We have obtained our information from public sources that we believe to be accurate and reliable, or from sources whom we believe are not insiders or connected parties to the companies mentioned herein. However, we are certainly NOT in business of making investment recommendations. This is not an investment report and should not be regarded as such. Read and use our reports at your own risk, and most important of all, DO YOUR OWN RESEARCH BEFORE YOU COMMIT OTHER PEOPLE'S MONEY.

We and/or our associates/partners may have long or short positions in the equities and/or their derivatives at the time of publication of our reports, and we and/or our associates/partners may maintain or change our positions at any time.

Truth About Lumena New Materials (00067.HK)

Part 1. Investigation into thenardite production

Lumena had three thenardite production facilities (each with its glauberite mine) at the time of its IPO in June 2009. After listing, it acquired another facility in Yuegou. This is shown at the following table.

Company Information 1 – Thenardite facilities overview		
Mining Area	Thenardite Type	Designed Capacity (tons per year)
Dahongshan	15-20% medical thenardite, remainder is powder thenardite	600,000
Guangji	“Specialty” thenardite	1,000,000
Muma	Medical thenardite	200,000
Yuegou	“Specialty” thenardite (animal feed-grade)	300,000

Source: Lumena

The company claimed the following output figures at its four facilities:

Company Information 2 – Lumena’s claim of annual output at its four plants							
Year end Dec 31 (tons per year)	2006	2007	2008	2009	2010	2011	2012
Output	504,199	603,839	576,569	1,660,000	1,955,054	1,996,406	1,706,912
Dahongshan	504,199	603,839	576,569	640,000	600,014	552,047	331,376
Guangji				1,020,000	1,099,440	980,208	946,254
Muma					199,020	195,371	174,006
Yuegou					56,580	268,780	255,276

Source: Lumena

Sales volume and revenue are reported as follows:

Company Information 3 – Revenue and sales volume of thenardite							
Year end Dec 31	2006	2007	2008	2009	2010	2011	2012
Sales volume (tons)	506,106	696,944	1,503,725	1,657,291	1,967,412	1,996,369	1,663,674
Industrial-grade	478,135	621,663	1,404,645	1,527,288	1,667,596	1,702,933	1,405,471
- powder thenardite	478,135	532,393	477,815	502,617	511,576	453,983	203,941
- “specialty” thenardite		89,270	926,830	1,024,671	1,156,020	1,248,950	1,201,530
Medical thenardite	27,971	75,281	99,080	130,003	299,816	293,436	258,203
Sales revenue (Rmb m)	205	372	1,140	1,344	1,961	2,040	1,575
Industrial-grade	152	226	948	1,008	1,171	1,141	703
- powder thenardite	152	149	154	127	130	132	53
- “specialty” thenardite		77	794	882	1,041	1,009	650
Medical thenardite	53	146	192	336	790	899	872
Average price (Rmb/ton)	405	533	758	811	997	1,022	947
Industrial-grade	317	363	675	660	702	670	500
- powder thenardite	317	281	323	252	254	292	261
- “specialty” thenardite		858	856	860	900	808	541
Medical thenardite	1,899	1,934	1,939	2,582	2,636	3,064	3,376

Source: Lumena

Truth About Lumena New Materials (00067.HK)

Lumena analyses its thenardite sales volume and revenue along product lines, namely medical thenardite and industrial-grade thenardite. There are two types of industrial thenardite, that in powder form and the so-called “specialty” thenardite. Initially, the company disclosed respective sales volume and revenue for all three types. Starting from the 2012 annual report, the company combined powder and “specialty” thenardite into industrial-grade thenardite, though we can still estimate the output of the two based on the output of the four different facilities.

1.1. Medical thenardite output is absurdly high

At its IPO in mid-2009, Lumena took pride in having the only GMP certified plant in China for the production of medical thenardite at its Dahongshan facility. In late 2011, its Muma facility was also awarded a certificate.

The joint website of Lumena’s principal subsidiaries, Chuanmei Special Glauber Salt Co Ltd and Chuanmei Mirabilite Co Ltd, describe a normal dosage as 6-12g with a limit of 10-30g per day, as shown below.

Company Information 4 – Chuanmei’s description of its medical thenardite

Current Position : Home > Natrii Sulfas

Natrii Sulfas
来源: 阅读1248次 发表于: 2010-5-16



Name: Sodium sulfate decahydrate
Latin: NATRII SULFAS
Ingredient: Na₂SO₄·10H₂O

Description: Crystals prismatic, oblong, irregular or granular. Colorless or white translucence. Crisp and brittle. Fracture with glassy luster when broken. Odorless, salty in taste.

Indications: Relax the bowels, soften the hard lumps, purge the fire and relieve swelling. Used for internal heat-syndrome with constipation and abdominal distension. External application is for hemorrhoids and swelling.

Dosage and Administration: 6~12g, dissolved in decoction or in boiling water for oral use, 10~30g daily. Proper amount for external use.

Contraindications: Pregnant woman should be used with doctors' direction. It's should not be used with Sulphur, Rhizoma Sparganii.

Storage: Sealed, stored at below 30°C.

Package: Packed in polyethylene complex pellicle bag.

Specification: 6g/bag, 9 bags/box, 72 boxes for one case.

Validity: Thirty six months.

SFDA Approval Code: Z51022578

返回上页

Copyright ©Sichuan Chuanmei Special Glauber Salt Co.,Ltd | Sichuan Province Chuanmei Mirabilite Co.,Ltd All rights reserved. 蜀ICP备05017439号

Source: <http://en.chinachuanmei.cn/mshow.asp?id=3>

What does a 6g standard dose of laxative mean in the context of Lumena’s annual sales volume of nearly 300,000 tons (in 2010 and 2011, though sales volume fell to 258,203 tons in 2012)?

It means that every Chinese (old people and infants included) needs to take more than 30 doses per year just to consume Lumena’s sales volume!

Sales volume of 258,000 tons in 2012 = 258,000,000,000 grams
divided by 1,300,000,000 people = 198 grams per person per year
divided by a standard dose of 6 grams = 33 doses per year

The sales volume of Lumena’s medical thenardite is plainly absurd! The Chinese do not need so much laxative!

Truth About Lumena New Materials (00067.HK)

During our investigations, we understand that Lumena also sells medical thenardite as a pharmaceutical additive to pharmaceutical manufacturers directly, but the volume of this business is so small that it can be ignored.

1.1.1. Muma facility's real output only a fraction of reported numbers

And we are quite certain that the company simply does not produce so much medical thenardite.

We have listened to a conversation between the Muma facility's manager and a potential buyer of medical thenardite right outside the plant. According to the manager, the Muma facility is producing several thousand tons of medical thenardite a year.

To protect the safety of the Muma manager and other sources including villagers living near Lumena's plants, we will not make public any audio or video recordings in which they reveal evidence of Lumena's lies or exaggerations. Retaliation by Chinese companies against whistleblowers has been well documented by the media (for one example, check out www.publiccompanyprisoner.org). We are, however, sharing such audio/video recordings with the Securities and Futures Commission of Hong Kong (SFC).

The following is a transcript, translated into English, of the conversation with the Muma manager.

Evidence 1 – English transcript of audio clip of Muma facility plant manager on medical thenardite output

At 13'36":

Potential buyer: How much can you supply at this plant?

Muma Manager: Certainly we can satisfy your needs.

Potential buyer: How much can you produce?

Muma Manager: How much do you need?

Potential buyer: How much do I need? The main thing about this medicine is that the usage is not very substantial. Many people use it, but it all depends on the doctors' preference. Some doctors don't like to use it and prefer to use something else, some like to use this, this thenardite. This is what our market research finds out. The usage is not substantial.

Muma Manager: We can certainly assure your usage.

Potential buyer: Oh. So what's your annual output?

Muma Manager: Ummmmm(14'20") ... several thousand.

Potential buyer: How much?

Muma Manager: Several thousand tons.

Potential buyer: Several thousand tons? Oh... several thousand tons! Now that's quite a lot. You can supply that much?

Muma Manager: I can supply that much.

Potential buyer: So there's no problem in supply, in production?

Muma Manager: No problem in supply.

Potential buyer: Supply amount is not a problem?

Muma Manager: Not a problem.

Source: Emerson Analytics

According to the manager, the designed capacity and actual output of several thousand tons is not even 5% of the 200,000 ton capacity claimed by the company. But one can detect that he hesitated (at 14'20") when he made the "several thousand tons" claim. He was probably lying and the actual output was probably not even a thousand tons. Lumena is exaggerating its sales volume by well over 20 times for this facility!

Truth About Lumena New Materials (00067.HK)

1.1.2. The Dahongshan facility has no medical thenardite production

In addition, since the opening of the Muma facility, the company has consistently claimed that its annual sales volume of medical thenardite is bigger than the total output at Muma. This serves to reinforce the legend that the Dahongshan facility has continued to produce medical thenardite. In any case, the company has always claimed that about 15-20% of Dahongshan's output is dedicated to medical thenardite.

Lumena has never published the total annual output of medical thenardite. It does give the total sales volume per year as well as the annual output of the Muma facility. As can be seen from the following table, the gap between total sales volume and Muma's annual output in the last three years has been substantial, and implies that Dahongshan's annual output of medical thenardite should be around 80,000-100,000 tons, assuming that the inventory had held reasonably steady.

Company Information 5 – Sales volume and output of medical thenardite							
Year end Dec 31 (tons)	2006	2007	2008	2009	2010	2011	2012
Total sales volume	27,971	75,281	99,080	130,003	299,816	293,436	258,203
Muma claimed output					199,020	195,371	174,006
Implied Dahongshan output	27,971	75,281	99,080	130,003	100,796	98,065	84,197
as % of total medical thenardite	100.0	100.0	100.0	100.0	33.6	33.4	32.6

Source: Lumena

However, there is no evidence that Dahongshan is continuing to produce medical thenardite. One can see from the following three photographs and video clip, all taken on September 2013, that the medical thenardite plant at Dahongshan is not in use.

In the first photograph, the access road to the Dahongshan medical plant is overgrown with grass and weed, a clear indication that there has not been much traffic (almost certainly no vehicular traffic and probably very little pedestrian traffic as well) for a long time. The building in the middle of the photograph, as indicated by the red arrow, is the medical plant.



Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

In the second photograph, the main gate of the medical plant is locked up during daytime.

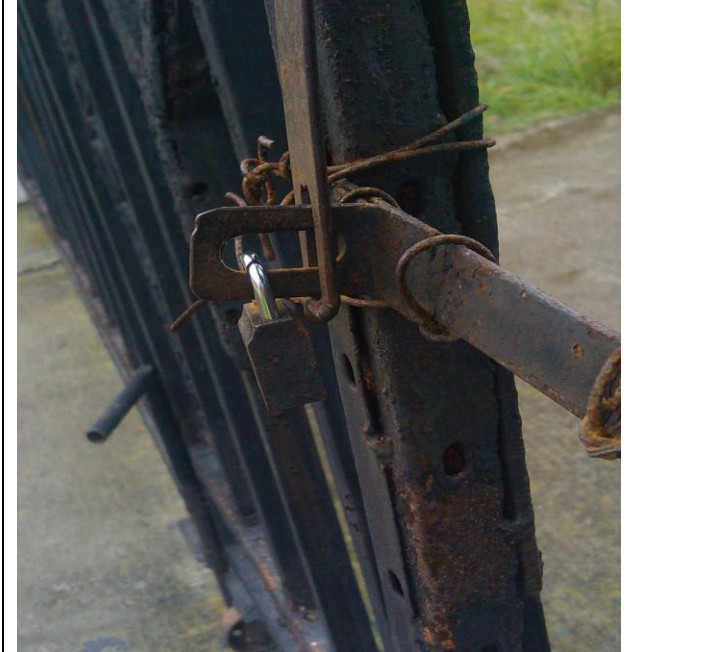
Evidence 3 – Main gate of Dahongshan medical plant



Source: Emerson Analytics

And in the third photograph, below, viewed from inside the gate, the lock has turned rusty, suggesting that it has not been used for quite some time.

Evidence 4 – Lock on main gate of Dahongshan medical plant



Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

The following video clip was taken by our investigators who visited the medical plant in September 2013.

Evidence 5 – Video clip of visit to Dahongshan medical thenardite plant*



Source: Emerson Analytics

* You may go to www.emersonanalytics.cloud/downloads/Lumena-HK_0067.zip to download the file.

According to a villager near the Dahongshan facility, the medical thenardite production line was taken out in 2010, about three to four years ago, and moved to the Muma facility.

The following is a transcript, translated into English, of the Dahongshan villager's audio clip on the production of medical thenardite. Again, we are sharing this audio clip with SFC.

Evidence 6 – English transcript of audio clip of Dahongshan villager on medical thenardite output

At 00'00":

Emerson investigator:	So medical thenardite is made in Guangji?
Villager:	In Muma mountain.
Emerson investigator:	Oh?
Villager:	Muma mountain. Medical production is all moved to Muma mountain.
Emerson investigator:	So the medical use production line is all moved to Muma? When was it moved?
Villager:	It's been a couple of years.
Emerson investigator:	So did they build up that plant in Muma a couple of years ago when they moved it out of here?
Villager:	Yes, it's been more than a couple of years. More than a couple of years.
Emerson investigator:	More than a couple of years?
Villager:	It's like three years.
Emerson investigator:	Three years?
Villager:	About three years. Probably three to four years.
Emerson investigator:	So that was in 2010.
Villager:	Yeah.

Source: Emerson Analytics

To conclude:

- The output and sales volume of medical thenardite claimed by Lumena is too high to be true, as the Chinese cannot possibly consume it all;
- Conversation between the Muma medical thenardite factory manager and a potential buyer reveals that the actual output is merely a few percent of the amount claimed by Lumena;

Truth About Lumena New Materials (00067.HK)

- Photographic and video evidence show that Dahongshan’s medical facility has been abandoned for long time and one villager said that the Dahongshan medical thenardite production line was moved to Muma in about 2010;
- Based on the above, Lumena’s medical thenardite output is probably less than 1,000 tons a year. The exaggeration could be 200 times.

1.2 “Specialty” thenardite is a big lie

Lumena produces its so-called “specialty” thenardite at the Guangji and Yuegou facilities. This is made clear in p.17 of the company’s 2011 annual report.

When one googles “specialty thenardite”, among the first 100 results, everything that refers to “specialty thenardite” as a product has to do with Lumena. One just cannot help but suspect that “specialty thenardite” is a phrase coined by Lumena and no one else bothers with it. If you read this section carefully, you will see that thenardite is a commodity that is basically 99% pure, and that Lumena itself does not manufacture any high-priced “specialty” thenardite.

Company Information 6 – Thenardite Type

Dahongshan Mining Area (powder thenardite & medical thenardite)

Our mine in the Dahongshan Mining Area is a fully developed and operational underground mining and processing facility that produced approximately 552,047 tonnes of thenardite for the year ended 31 December 2011. As of the date of this report, our mining and production facilities in the Dahongshan Mining Area have a total production capacity of 0.6 million tpa. The production capacity of this mining area is used to produce powder thenardite and medical thenardite as to 80% to 85% and 15% to 20% respectively. There was no material change in the glauberite reserves and resources of the Dahongshan Mining Area as of 31 December 2011.

Guangji Mining Area (specialty thenardite)

Our Guangji Mining Area produced approximately 980,208 tonnes of thenardite for the year ended 31 December 2011. The production capacity of our mining and production facilities in the Guangji Mining Area is 1.1 million tpa for the year ended 31 December 2011. There was no material change in the glauberite reserves and resources of the Guangji Mining Area as at 31 December 2011.

Muma Mining Area (medical thenardite)

Our Muma Mining Area have a production facility for medical thenardite of a total production capacity of 200,000 tpa. Our Muma Mining Area produced approximately 195,371 tonnes of medical thenardite for the year ended 31 December 2011. There was no material change in the glauberite reserves and resources of the Muma Mining Area as of 31 December 2011.

Yuegou Mining Area (animal feed grade thenardite)

Our production facility for animal feed grade thenardite in the Yuegou Mining Area has a total production capacity of 0.3 million tpa. Our Yuegou Mining Area produced approximately 268,780 tonnes of animal feed grade thenardite for the year ended 31 December 2011. There was no material change in the glauberite reserves and resources of the Yuegou Mining Area as at 31 December 2011.

Source: Lumena annual report 2011, p.17

Based on figures in the [IPO prospectus](#) (p.105) and various annual reports, we can calculate that the company was implying that it sold its “specialty” thenardite at average prices of Rmb800-900 a ton during 2007 through 2011. (See the table in Company Information 3). This was more than double the average prices of Rmb252-323 for powder thenardite during the same period.

Unfortunately, that’s too good to be true. Standard thenardite is 99% pure. As a simple and common commodity, a tiny little quality difference is not sufficient to command a premium of 150-200%. We don’t think so. Neither do the end-users.

Truth About Lumena New Materials (00067.HK)

1.2.1. Salesman said no “specialty” thenardite was produced

It is easy to find out if the company is really selling “specialty” thenardite at such exorbitant prices as it claims – one just needs to call up the company and place an order. One can obtain the telephone number of Chuanmei’s (Lumena's subsidiary handling the thenardite business) sales department from its website, as shown in the following photograph.

Company Information 7 – Chuanmei “specialty” thenardite sales contact on its website

The screenshot shows the website for Sichuan Chuanmei Special Glauber Salt Co., Ltd. The header includes the company name in English and Chinese, a logo, and navigation links for Home, Bookmark, and Contact. The main navigation bar lists: About Chuan Mei, Recognition And Awards, Milestones, Production Facilities, Mirabilite Products, and Sodium Sulfate Products. Below this is a collage of images showing industrial equipment, workers in blue uniforms, and large stacks of white bags of product. A sidebar on the left under 'Sodium Sulfate Products' has a 'Contact' section with a red box around the phone number: Tel: 028-81130274/81130271. The main content area contains text about the company's history and products, mentioning 'Chuanmei' brand Sodium Sulphate Anhydrous and 'Special SSA' products.

Source: <http://en.chinachuanmei.cn/natril.asp>

As one can hear from the recorded telephone conversation between our investigator and Chuanmei’s sales executive, the company simply does not produce “specialty” thenardite.

Evidence 7 – Audio clip of Chuanmei sales executive on “specialty” thenardite*

Source: Emerson Analytics

* You may go to www.emersonanalytics.cloud/downloads/Lumena-HK_0067.zip to download the file.

The following is a transcript, translated into English, of the audio clip of Chuanmei Thenardite Company sales executive.

Evidence 7.1 – English transcript of audio clip of Chuanmei sales executive on “specialty” thenardite

At 00’00”:

Emerson investigator:	Hi, how are you?
Chuanmei sales executive:	Hello.
Emerson investigator:	Is this Chuanmei Thenardite?
Chuanmei sales executive:	Yes.
Emerson investigator:	Well, can I ask about your thenardite? Do you have thenardite in supply now?

Truth About Lumena New Materials (00067.HK)

Chuanmei sales executive: Yes, there is supply.
 Emerson investigator: So there is supply? Your thenardite, what kind of specifications have you got? Only 99 thenardite? Or would you have sub-standard products like 95 thenardite?
 Chuanmei sales executive: No sub-standard products. Normally, we don't have sub-standard products.
 Emerson investigator: So, all 99 thenardite?
 Chuanmei sales executive: Yes.
 Emerson investigator: Now what is the price of your 99 thenardite?
 Chuanmei sales executive: 330 (yuan).
 Emerson investigator: 330?
 Chuanmei sales executive: Yeah.
Emerson investigator: And do we have any "specialty" products like the low chloride, that kind of products?
Chuanmei sales executive: No. No.
Emerson investigator: Not this kind?
Chuanmei sales executive: That's right.
Emerson investigator: What if, say, if I specifically order it, can you produce it?
Chuanmei sales executive: That's not possible.
 Emerson investigator: You won't produce it?
 Chuanmei sales executive: Hmmm...
 Emerson investigator: Now if I place an order ...
 Chuanmei sales executive: What kind of product do you need?
 Emerson investigator: I need a large amount of 99 thenardite. But there are some special needs, of course the orders are smaller, for "specialty" thenardite. So I want to know if you have them?
 Chuanmei sales executive: No.
 Emerson investigator: OK, fine. Now if I want to place an order, I want to know if you have supplies ready?
 Chuanmei sales executive: We are continuously in production. And our production is normal.
 Emerson investigator: So supply is not a problem?
 Chuanmei sales executive: Right.
 Emerson investigator: Oh, OK. Now if I ask for a supply, for say, 50-60 tons, there will not be a problem in supply?
 Chuanmei sales executive: What do you need?
 Emerson investigator: 99 thenardite. The standard stuff.
 Chuanmei sales executive: You can get it anytime. No need for any preparation. Because we are constantly in production.
 Emerson investigator: OK. OK. OK. Good. Good. Good. Thank you.
 Chuanmei sales executive: That's alright.
 Emerson investigator: Bye.

Source: Emerson Analytics

1.2.2. Dahongshan's price is higher than Guangji's, rather than vice versa

To establish the ex-factory prices of thenardite from the Dahongshan and Guangji facilities, we simply called up Chuanmei and checked the price difference between the two.

As you can hear from this audio clip, Dahongshan's thenardite is more expensive than that of Guangji, at Rmb20 a ton more. But isn't Guangji supposed to be producing "specialty" thenardite that is priced at more than double the standard thenardite?

Evidence 8 – Audio clip of Chuanmei sales executive on thenardite prices*

Source: Emerson Analytics

* You may go to www.emersonanalytics.cloud/downloads/Lumena-HK_0067.zip to download the file.

The following is a transcript, translated into English, of the audio clip of a Chuanmei sales executive on thenardite prices.

Evidence 8.1 – English transcript of audio clip of Chuanmei sales executive on thenardite prices

At 00'00":

Emerson investigator: Hi, how are you?
 Chuanmei staff: Hi, how are you?

Truth About Lumena New Materials (00067.HK)

Emerson investigator: Are you Sichuan Chuanmei Thenardite?
Chuanmei staff: Yes, please go ahead.
Emerson investigator: I want to know if you have 99 thenardite?
Chuanmei staff: Yes, indeed.
Emerson investigator: How much is it?
Chuanmei staff: Three hundred forty a ton.
Emerson investigator: Three hundred forty a ton.
Chuanmei staff: Hello?
Emerson investigator: Hello, can you hear me?
Chuanmei staff: Yes, go ahead, I can hear you.
Emerson investigator: I see on your website that you have four mines?
Chuanmei staff: Yes.
Emerson investigator: And it says the quality of the mineral output is different?
Chuanmei staff: They have different purity levels.
Emerson investigator: So, the thenardite from Dahongshan or Guangji, how much is their 99 thenardite?
Chuanmei staff: Well, what industry are you in? It depends on what product suits you best.
Emerson investigator: I'm in the washing industry.
Chuanmei staff: For washing, the 99 thenardite must be of first-rate quality.
Emerson investigator: Yes, yes. Because I see that you mention about the different quality of the mineral output, I guess the prices are not the same?
Chuanmei staff: Oh, the different quality ... the difference is on testing standards.
Emerson investigator: What does that mean?
Chuanmei staff: It refers to the finished products, not the minerals.
Emerson investigator: Oh. Then may be I have interpreted it in a different way. In any case, I hear that the 99 thenardite from Dahongshan is different from the Guangji 99 thenardite in price?
Chuanmei staff: Right, yes.
Emerson investigator: So how much are they?
Chuanmei staff: Which one do you need?
Emerson investigator: I want to see how much different are their prices, whether the difference is too much or not, in terms of prices.
Chuanmei staff: The difference is 20 yuan.
Emerson investigator: The difference is 20, isn't it? Then which is more expensive?
Chuanmei staff: Dahongshan is more expensive.
Emerson investigator: Dahongshan ... is three hundred and ...?
Chuanmei staff: Three hundred sixty.
Emerson investigator: Dahongshan is 360, so Guangji is 340.
Chuanmei staff: Three hundred forty.
Emerson investigator: So you were quoting me Guangji price, right?
Chuanmei staff: Correct.
Emerson investigator: Now will you handle transport?
Chuanmei staff: Transport ... where are you?
Emerson investigator: That is to say, if it is far away, you'll add a transport cost?
Chuanmei staff: Yes.
Emerson investigator: So how many tons minimum before you will take care of transport?
Chuanmei staff: Fifty-five tons.
Emerson investigator: Fifty-five tons. That's one truck load.
Chuanmei staff: Yes, a container box.
Emerson investigator: So, is that your lowest price?
Chuanmei staff: Yes.
Emerson investigator: Well, let me check around. Thank you.
Chuanmei staff: Good.

Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

1.2.3. Sales receipt shows Guangji does not make “specialty” thenardite

We have also seen a receipt and its related dispatch list (Evidence 9) for industrial-grade thenardite from Guangji facility. According to the receipt, the standard thenardite cost Rmb320 a ton. Thus, Guangji’s product is actually cheaper than that of Dahongshan, even though it is supposed to be producing the more expensive “specialty” thenardite.

To protect the identity of the purchaser, we are not making this receipt and its dispatch list public. We are, however, sharing this information with SFC.

To conclude, the reality of Lumena’s so-called “specialty” thenardite myth is:

- Chuanmei’s salesman said over the telephone that the company did not produce any “specialty” thenardite of the “low chloride” or similar type claimed by Lumena in its IPO prospectus or annual reports;
- The Guangji facility, which is supposed to be the main producer of “specialty” thenardite, sells its products at a price that is lower than that commanded by the Dahongshan facility, which is producing only standard thenardite; and
- Except for some animal feed-grade thenardite, there is really no “specialty” thenardite production at all.

1.3 Industrial thenardite output also exaggerated

Lumena claims that it sold a total of 1.41m tons of industrial grade thenardite in 2012, with 1.2m tons of “specialty” thenardite being produced by Guangji and Yuegou. Our investigations show that total industrial grade thenardite output has been seriously exaggerated, by more than 10 times.

1.3.1. Guangji output not even 10% of Lumena’s claim

Thenardite produced by Guangji is shipped to customers by rail. The rail line, however, does not connect to the plant directly. It sends products by medium-sized trucks, each carrying about 30 tons of thenardite, to the train station. Two trucks then empty their contents into a container box to be carried by a train, as shown in the following photograph.



Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

According to Lumena, Guangji produced about 946,000 tons of thenardite in 2012 and more than 486,000 tons in 1H2013, up from 470,797 the same period a year ago. Assuming 330 days of transport activities a year, such a humongous volume means at least 95 trucks are needed on a daily basis to carry the load.

$946,000 \text{ tons} / 330 \text{ days} / 30 \text{ tons per truck} = 95.6 \text{ trucks per day}$

As a truck needs to go in to the plant empty and come out fully loaded, that's at least 190 trips per day. In other words, except for the long holiday breaks during the Chinese new year and National Day holidays, there is a truck coming into or going out of the plant every eight minutes, 24 hours a day.

Our investigators observed the Guangji operation for two to three months during the past summer and fall. On average, we saw fewer than 10 truckloads per day, a far cry from the 95 trucks needed to clear the load. That's not even 10% of the claimed output. Did we coincidentally visit them during their maintenance shutdown? But a maintenance shutdown should not last more than a month.

1.3.2. Yuegou facility has never produced anything

Lumena acquired the Yuegou facility some time in 2009 for an undisclosed sum. It then spent an undisclosed amount to install an animal feed-grade thenardite production line, with trial production said to have started in August 2010. The company has also claimed the 300,000-ton-per-annum plant had been producing some 260,000 tons of animal feed-grade thenardite (which can be regarded as a "specialty" thenardite, but not for industrial use) a year during the last two years.

Our visit to the Yuegou facility, however, revealed an entirely different picture. Our inspection and our conversation with the local people suggest that the Yuegou facility has never been in production since it was acquired by Lumena.

Evidence 11 – Yuegou facility main gate with corn drying under the sun



Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

This picture of the Yuegou facility main gate shows the open space in front of the gate being used by local farmers to dry their corn. No company will allow this to happen if it is in operation and has traffic going through. The farmers also told us that the Yuegou plant had NEVER produced anything.

To protect those filmed in the interviews, we will not publish the interviews in this report. We are, however, sending the video to SFC.

Evidence 12 – Video clip of farmer nearby Yuegou facility



Source: Emerson Analytics

We can see from the video two local farmers drying their corn right outside the main gate of the plant that is supposed to be producing feed-grade thenardite. The woman farmer tells our investigator that there is no one in the plant and that production of feed-grade thenardite is in Guangji. A partial transcript in English is provided below for our readers' convenience.

Evidence 12.1 – English transcript of video clip of farmer nearby Yuegou facility

At 18:07'30":

Emerson investigator: **Is there anyone inside the factory?**
Farmer: **No.**
Emerson investigator: Really?
Farmer: No. What do you want?
Emerson investigator: I want to buy their products.
Farmer: Buy their products? What do you want to buy? Sodium Sulfate?

Then at 18:08'06":

Emerson investigator: **Is the product over there the same as that here?**
Farmer: **There is no production here. Only in Guangji.**
Emerson investigator: No production here?
Farmer: There is no production here. Only in Guangji.
Emerson investigator: There is no production here all along?
Farmer: Right. No production.

Truth About Lumena New Materials (00067.HK)

Then at 18:09'23":

Emerson investigator: This factory has never been in production?
Farmer: It has never been in production after they bought it.

Source: Emerson Analytics

Another villager told our investigator that the Yuegou facility used to be called Jianxin Chemicals Factory and belonged to a prison. Since Boss Li (the ultimate controller of Lumena) bought it, there has never been any production.

Evidence 13 – English transcript of audio clip of another farmer nearby Yuegou facility

Emerson investigator: They don't produce anything over there in Yuegou?
Farmer: **No, no production.**
Emerson investigator: **They never produced anything after completion?**
Farmer: **They did produce years ago, before Boss Li bought it. It used to be a labor camp.**
Emerson investigator: La...?
Farmer: Labor camp.
Emerson investigator: It was a labor camp?
Farmer: Yes, it was a labor camp.
Emerson investigator: So it was a prison.
Farmer: Yes, the prison moved to Pengshan.
Emerson investigator: Moved to Pengshan?
Farmer: Yes, moved to Pengshan. Then Boss Li bought this.
Emerson investigator: Boss Li bought this, and build the Yuegou ...
Farmer: That was an existing chemical plant, the Yuegou Chemical Factory.
Emerson investigator: Oh, I saw a sign over there... it was originally called Xinjian, something Xin ...
Farmer: Jianxin Chemical Factory.
Emerson investigator: Jianxin Chemical Factory.
Farmer: Jian (construct) xin (new) person .. a prison.
Emerson investigator: Oh, originally a prison.
Farmer: Yes, a prison of several thousand people.
Emerson investigator: Several thousand people? That's very big. So there's been no production since it was bought out?
Farmer: No, never.

To conclude, the main problems with Lumena's industrial-grade thenardite production are:

- The Yuegou plant has never been in production since it was acquired by the company in late 2009, which means the company exaggerated its production capacity by 300,000 ton a year;
- Given the evidence that the company has been fabricating production figures at Muma, Yuegou and Dahongshan medical plant, it is difficult to believe that its volume figure at Guangji is any more reliable; and
- Observation of Guangji's traffic flow suggests that its output is not even 10% of that claimed by Lumena.

Truth About Lumena New Materials (00067.HK)

Part 2. Investigation into PPS Production

Lumena bought what was said to be the world's largest polyphenylene sulfide (PPS) manufacturer from connected parties in 2010 for a total of nearly Rmb10bn. The available capacity at that time was shown below, copied from the company's acquisition document dated December 14, 2010.

Name	Location	Product Types	Capacity (metric tons per annum)
Deyang Materials	Deyang City, Sichuan Province, PRC	injection moulding; coating-grade or fibre-grade PPS resin, as required	20,000
		injection moulding; coating-grade or fibre-grade PPS resin, as required	4,000
		PPS fibre	5,000
Deyang Chemical	Chengdu City, Sichuan Province, PRC	injection moulding; coating-grade or fibre-grade PPS resin, as required	6,000
		PPS compounds	30,000

Source: Lumena

Note: Deyang Materials refers to Sichuan Deyang Special New Materials Co., Ltd.

Deyang Chemical refers to Sichuan Deyang Chemical Co., Ltd.

The following table shows Lumena's resin output and sales volume of final products in the last few years. The company did not disclose its resin output in 2011 and 2012, and gave only the first half number for 2010. We therefore estimated the resin output for those three years using final products sales volume to resin output in 2009, which was 1.45x.

Year end Dec 31 (tons per year)	2007	2008	2009	2010	2011	2012	1H2012	1H2013
Resin output	4,439	11,351	18,058	21,463	24,867	27,576	13,369	14,342
Sales volume	6,430	15,765	26,178	31,114	36,049	39,976	19,382	20,796
PPS resin					5,778	7,614	3,380	4,129
PPS compounds					25,635	27,608	13,573	14,374
PPS fiber					4,636	4,754	2,429	2,293
Sales volume / Resin output	1.45	1.39	1.45					

Source: Lumena, Emerson Analytics

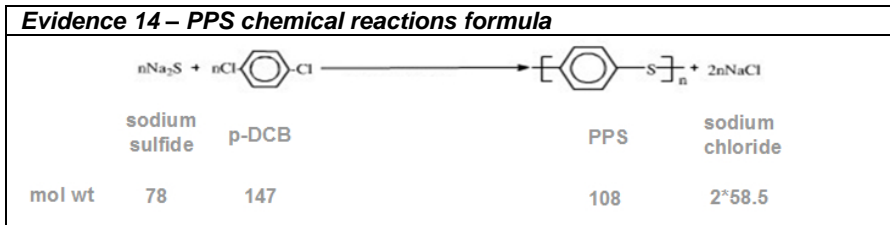
Truth About Lumena New Materials (00067.HK)

2.1. PPS resin actual output is less than 20% of claimed amount

Based on our investigations and analysis, Lumena's real PPS resin output is probably less than 20% of what the company wants us to believe.

2.1.1. Raw material usage shows PPS resin output way below published data

The following table shows the chemical reactions formula for PPS, with the third line showing molecular weight.



Lumena's PPS acquisition document says that its Na₂S, raw material for PPS production, was at that time exclusively supplied by a Shaanxi-based company. Our investigation shows that this company was Shaanxi Fuhua Chemical Co Ltd (陕西富化化工有限责任公司). It is now still a leading Na₂S supplier to Lumena. We have also confirmed that the Na₂S Lumena uses to produce its PPS is the 60% content low ferric sodium sulfide.

Evidence 15 – Shaanxi Fuhua's sodium sulfide

陕西富化化工有限责任公司
Shaanxi Fuhua Chemical Co., LTD.

Home About Us Products Qualification Honor Order News Contact Us Gallery

Products

- Precipitated barium sulphate
- Low ferric sodium sulfide
- Modified superfine precipitated ...
- Anhydrous sodium sulfide
- Crystal sodium sulfide

EMAIL

Name:

Password:

Login

Products

Low ferric sodium sulfide

Product name: Low ferric sodium sulfide(Na₂S·2+4H₂O)

Properties: mixture. Appearance is yellow flaky matter

Packaging: 25kg/bag. Inner bag is woven bag, sewn by machine; the intermediate layer is plastic film, sealed by heat; Outer bag is ink gray netted woven bag, sewn by machine.

Cautions: avoid rain, moisture and heat, no breakage, no mix with corrosive matter.

Uses: Mainly used in medicine, top-grade paper, PPS plastic, leather, printing and dyeing, ore dressing industry

Technical index:

Item	Index		
	Top grade	First grade	Qualified product
Na ₂ S, w/% ≥	60.0	60.0	60.0
Fe, w/ppm ≤	20	30	50
Water insoluble, w/% ≤	0.02	0.03	0.05
Sodium carbonate, w/% ≤	1.5	2.0	3.0
Appearance	yellow flaky, even size without lumpy matter, thickness ≤ 2mm		

Source: http://www.fuhua-chem.com/cgi/search-en.cgi?f=product_en1+product_en_1+company_en_1&t=product_en_1&i=33226

Truth About Lumena New Materials (00067.HK)

Based on the above formula, the production of 27,576 tons of PPS resin needs 33,193 tons of low ferric Na₂S, as shown below:

27,576 tons / 108 * 78 = 20,190 tons of pure Na₂S / 60% purity = 33,193 tons of low ferric Na₂S

So, how much is the actual demand for low ferric sodium sulfide at the Lumena PPS plants? We found this out after calling up the two operating subsidiaries, Deyang Materials and Deyang Chemical. The following picture of their joint website shows the telephone number called.

Company Information 10 – Joint website of Deyang Materials and Deyang Chemical

Contact Us

Sichuan Deyang Chemical Co., Ltd
Sichuan Deyang Special New Material Co., Ltd

Plant Address:
Chengdu Haton Park, 869 2nd Konggang Road, Southwest Airport Economic Development Zone, Shuangliu, Chengdu city, Sichuan, P.R.C. (Shuangliu Plant)
Deyang Haton Park, 9 Section 3 of West Jinshajiang Road, Deyang city, Sichuan, P.R.C. (Deyang Plant)
Website:www.chinapps.com
E-mail:market@chinapps.com

Sales Department Contact Information:

Headquarter:
Add: 8F Block E, Building 9, Hi-Tech Incubating Park, Tian Fu Avenue, Chengdu, Sichuan, P.R.C.
Tel: 0086-28-85986113 / 6819 / 6828 / 6827 / 6833 / 6823 / 6824 / 6826
Fax: 0086-28-85986113-6832

East China Office:
Add: Room 1601, Building 29, No. 58 Macao road, Putuo District, Shanghai City, P.R.C.
Tel: 0086-21-62667816
Fax: 0086-21-62766119

South China Office:
Add: 7C-13C, Shengshihuanan, Wanjiang District, Dongguan city, Guangdong, P.R.C.
Tel: 0086-769-23624049
Fax: 0086-769-23624149

Verification code: TCGM Not see? For a.

Source: <http://en.chinapps.com/contactus.aspx>

Click on the following link to listen to the recorded telephone conversation with Deyang companies merchandising department.

Evidence 16 – Audio clip of conversation with Deyang companies merchandising department*

Source: Emerson Analytics

* You may go to www.emersonanalytics.cloud/downloads/Lumena-HK_0067.zip to download the file.

The following is a transcript, translated into English, of the call.

Evidence 16.1 – English transcript of audio clip of conversation with Deyang companies merchandising department

At 00'32":

Receptionist: How are you?
Emerson investigator: How are you? I want to ask you, what is the telephone number of the merchandizing department?
Receptionist: Merchandizing department? Please wait, I'll transfer you.
Emerson investigator: Thank you.
Receptionist: Not at all.

At 01'00":

Truth About Lumena New Materials (00067.HK)

Receiver: Hello?
Emerson investigator: Hello, is this the merchandising department?
Receiver: Yes, good day to you.
Emerson investigator: Good day to you. The thing is this. And we here have sodium sulfide that we can supply. I see that your plant ...
Receiver: What about your capacity?
Emerson investigator: Our ... this ... our current capacity ... you ... your demand... what is your demand like? I mean your demand volume.
Receiver: Several hundred tons.
Emerson investigator: Several hundred tons a year, right?
Receiver: One month.
Emerson investigator: One month, several hundred tons.

Source: Emerson Analytics

So, Lumena's demand for low ferric sodium sulfide is only a few hundred tons a month. That translates into a few thousand tons a year, and certainly no more than 12,000 tons a year. This can produce up to 10,000 tons of PPS, a long way below the 27,000-ton output claimed by the company. The actual raw materials demand, as revealed by Deyang companies merchandising staff, suggests that the actual PPS output is unlikely to exceed one-third of what Lumena claims.

2.1.2. Deyang Materials engineer puts output at 5,000-6,000 tons

A potential client visited Deyang Materials during the summer of 2013 to find out about its products. We heard a recording of parts of the conversation that he had with staff on the floor.

An English transcript of the conversation is provided below for our reader's convenience.

Evidence 17.1 – English transcript of audio clip of Deyang Materials engineers

Potential client: We here, how much can we produce each year?
Engineer 1: We can produce ... can reach several thousand tons.
Potential client: One thousand tons?
Enginee1: Almost five to six thousand tons.
Potential client: Five to six thousand tons?
Engineer 1: Yes.
Potential client: Our stuff is ... a friend of mine told me that our stuff here includes resin ...
Engineer 1: Yes.
Potential client: Resin, and also ... what is it called? ... fiber...
Engineer 1: Yes.
Potential client: They are different?
Engineer 1: The resin ... it is ...it is ... intermediate ... product.
Potential client: Resin is intermediate product?
Engineer 1: It can ... it can be ... combined with glass fiber to become compound particles. The short fiber ... the fiber ... it can be considered a processed product and can be sold directly.
Potential client: Oh, fiber is based on resin and processed further. So, the five to six thousand tons, is it resin or ...?
Engineer 1: Resin. Resin can be further processed to become chips, compounds, long or short fiber, to be pulled into fiber.
Potential client: So this five, six thousand tons is resin. That means it's our most basic raw material, isn't it?
Engineer 1: Basically, after it's produced, it goes through the fiber process.
Potential client: How much can we produce accordingly?
Engineer 2: Fiber? The designed capacity ... that's ... here it is about five thousand tons.
Potential client: Designed capacity?
Engineer 2: It can be adjusted, depending on market conditions. Generally, it's several thousand tons, two, three thousand tons.
Potential client: So that's just two, three thousand tons a year.

Truth About Lumena New Materials (00067.HK)

Engineer 2: The current situation is two, three thousand tons.
Potential client: Two, three thousand tons.

Source: Emerson Analytics

2.1.3. Video recording of Deyang Materials traffic

Based on the previous formula, the production of 27,576 tons of PPS resin claimed by Lumena also requires 37,534 tons of para-dichlorobenzene p-DCB, as shown below:

27,576 tons of PPS / 108 * 147 = 37,534 tons of p-DCB

Ignoring other raw materials, just the two key raw materials and the intermediate output of PPS resin will amount to the movement of nearly 100,000 tons of goods at Lumena's plants, according to its claimed PPS resin output:

33,193 tons of Na₂S + 37,534 tons of p-DCB + 27,576 tons of PPS resin = 98,303 tons of key chemicals

Of the 30,000 tons of total PPS resin capacity, Lumena claims that Deyang Materials has a capacity of 24,000 tons a year. This implies a movement of nearly 80,000 tons, as calculated below:

98,303 tons of key chemicals / 30,000 tons of total capacity * 24,000 tons of capacity at Deyang Materials
= 78,642 tons

Again, assuming 330 days of transport activities a year, using 10-ton trucks (those that actually serve the plant), Deyang Materials needs 24 trucks a day to carry its load, implying 48 two-way truck movements every 24 hours. During daytime, one should see at least one truck movement every 15 minutes or so. Even if one assumes that a truck can carry 30 tons, there should be 16 two-way truck movements every day.

We observed Deyang Materials' plant over a five-month period during the past summer and fall. According to our count, truck traffic has been miserably low – only three to four truck movements a day.

The following photograph shows a typical 10-ton truck that arriving at Deyang Materials during our observation period.

Evidence 18 – Typical truck serving Deyang Materials



Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

We made video recordings of Deyang Materials' plant for several consecutive days. This video evidence is not included here but is shared with SFC.

In the following table, we list the truck movements at the Deyang Materials plant during five consecutive days in November 2013. The five-day video recording reflects a picture consistent with what we have observed over the past five months, which is the reason why we did not make more recording.

Evidence 19 – Log of Deyang Materials truck movement					
Days	Hours of video	Truck number	Movement Time	Direction	Truck condition
One	14.0	1	05:52	Out	Loaded
		2	08:08	In	Loaded
		3	08:35	In	Empty
Two	22.5	4	05:52	Out	Loaded
		5	10:19	Out	Loaded
		6	11:33	In	Loaded
		7	12:28	Out	Empty
		8	19:17	Out	Loaded
Three	17.0	9	05:57	Out	Loaded
		10	11:45	In	Loaded
Four	15.0	11	05:48	Out	Loaded
		12	07:02	In	Loaded
		13	17:09	Out	Empty
Five	13.0	14	05:59	Out	Loaded
		15	08:40	In	Empty
		16	10:10	Out	Loaded
		17	11:47	In	Loaded

Source: Emerson Analytics

We noticed a regular pattern in Deyang Materials' truck traffic: Every morning, at about 6am, a 10-ton truck carrying the license plate of “川 AG0920” will leave Deyang Materials' plant, and will return at noon or so. We followed the truck, and discovered that its destination was the Deyang Chemical plant in Chengdu, about 90km away. It would spend about one-and-a-half hours at Deyang Chemical before returning to Deyang Materials fully loaded. (In the following table, red entries numbered 1, 4, 9, 11 and 14 represent the truck leaving Deyang Materials. Those numbered 6, 10 and 17 are returning trips of 4, 9 and 14).

Truth About Lumena New Materials (00067.HK)

Evidence 20 – The truck serving Deyang Materials and Deyang Chemical

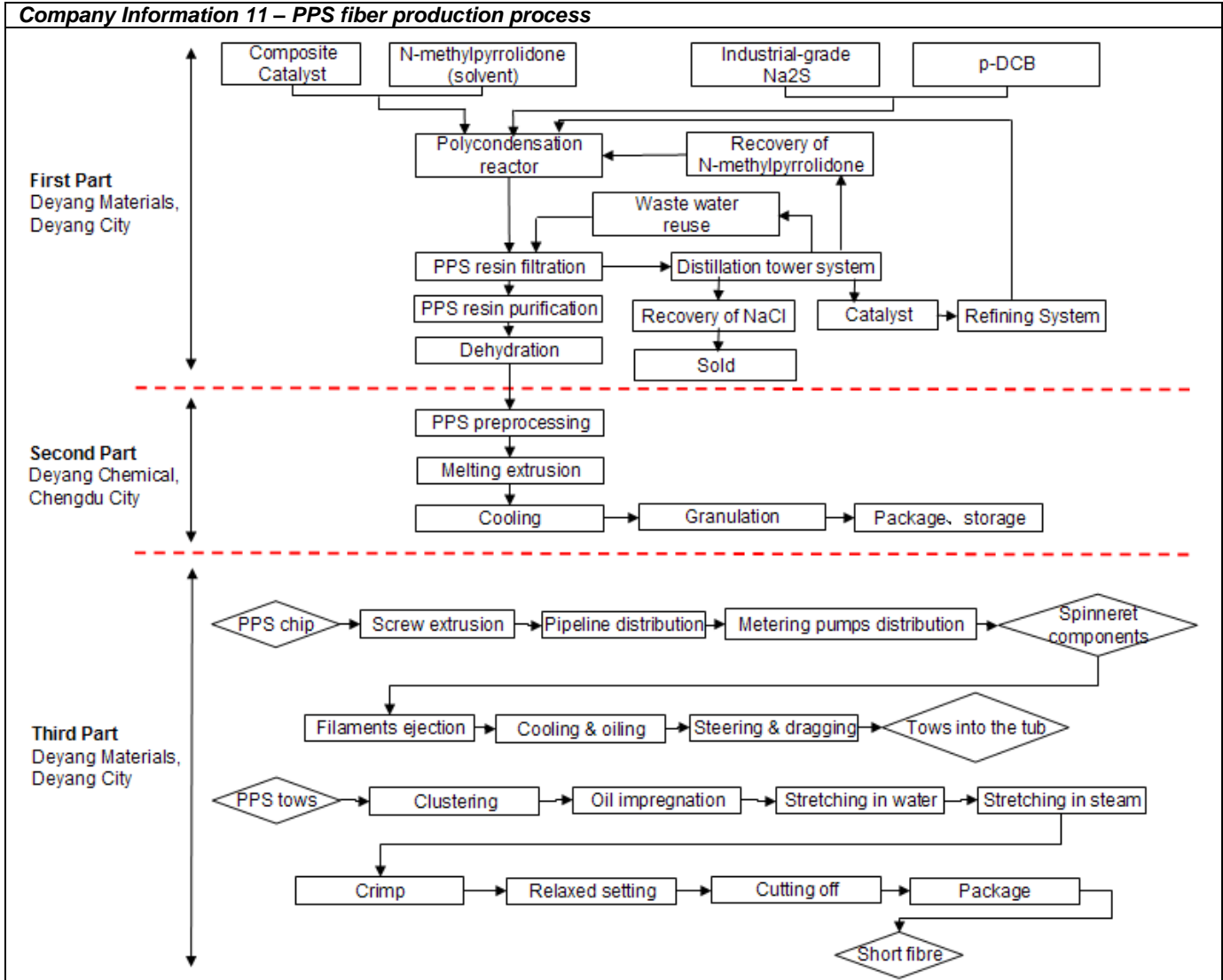


川A
G0920

Source: Emerson Analytics

Before we explain the significance of this particular truck, we refer our readers to an article published by Deyang Materials and Deyang Chemical in April 2013, entitled *A Brief Introduction to the Applications and Technology Development of PPS Fiber*, which explains the company's PPS fiber production process. Based on this article, the fact that the extrusion and chip-making processes are located in Deyang Chemical in Chengdu, and the traffic pattern between the two plants, we are convinced that Lumena's PPS fiber production process is structured as follows:

Truth About Lumena New Materials (00067.HK)



Source: <http://www.docin.com/p-655108386.html>, Emerson Analytics

Note: The above flowchart shows a very rough English translation of the Chinese original.

The first part of the flow chart can be found in p.65 of Lumena's [PPS acquisition document](#). This part deals with the production of PPS resin. The second part deals with the extrusion and chip-making process, which we are convinced is done at the Deyang Chemical plant in Chengdu. The third part deals with fiber making, which is only done in the Deyang Materials plant in Deyang City, as made clear in Company Information 8.

Thus, the truck “|| AG0920” is only handling Lumena's internal transport and does not involve the basic materials or final products. There would have been no need for this truck if the equipment for part two were located at the Deyang Materials plant in Deyang City.

Taking out the eight trips (represented in red in the Evidence 19 table) made by this truck, Deyang Materials actually saw nine trips of truck traffic involving raw materials and/or final products during those five days.

How can such a miserably low traffic volume handle the output that Lumena claims for its PPS business?

Truth About Lumena New Materials (00067.HK)

2.2. PPS compounds said to account for 44% of total revenue but actual output only 4% of reported level

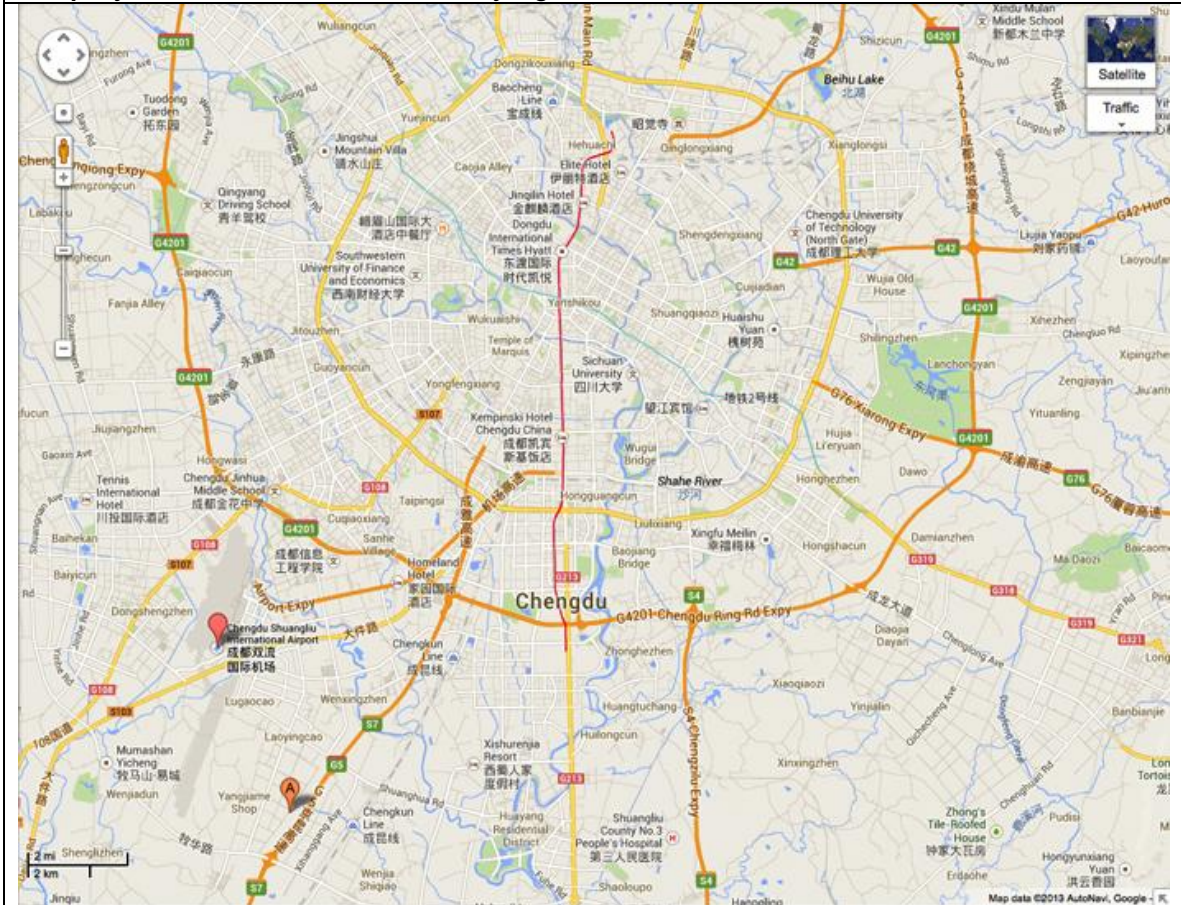
According to Lumena, it sold Rmb1.99bn worth of PPS compounds in 2012, accounting for 44% of total sales that year. However, our investigation and analysis show that its actual output was about 1,188 tons or 4.3% of that claimed by the company. That's an outrageous 23-time exaggeration!

The following is a detailed analysis of Lumena's PPS compounds production.

2.2.1. Where is the 30,000-ton PPS compounds capacity?

Lumena's PPS compounds facility belongs to Deyang Chemical. Deyang Chemical's PPS factory is located at Haton Garden in Shuangliu County in southwest Chengdu, capital of Sichuan province, and is indicated by the orange marker "A" in the following map, not too far away from the Chengdu Shuangliu Airport (marked by the red marker). It is right on the G5 Beijing-Kunming Highway/G93 Chengdu-Chongqing Highway.

Company Information 12 – Location of Deyang Chemical



Source: Google map

Haton Garden, marked out in the red box below, is an industrial complex in Shuangliu that houses Sichuan Tengzhong Heavy Industrial Machinery Co Ltd, Chengdu Tengzhong Avionics Co Ltd and Deyang Chemical.

Truth About Lumena New Materials (00067.HK)

The middle box, marked in red in Evidence 23, is the PPS compounds production plant with an annual capacity of 30,000 tons.

Evidence 23 – Location of PPS compounds plant



Source: Google map, Emerson Analytics

2.2.2. The key extrusion machine – TSE-65A

In September 2010, the *China Plastics Industry* magazine published an article “Preparation of low chloride PPS resin and a study on the properties of its modified material”. The author, Gou Liangwu, is chief engineer of Lumena. He is also a director of both Deyang Materials and Deyang Chemical. The article mentions an extruding machine, the co-rotating twin-screw TSE-65A, underlined in red below.

Evidence 24 – Lumena chief engineer Gou’s article

1.4 设备和仪器
 电子式悬臂梁冲击试验机: XC-22D, 承德精密试验机有限公司; 电子万能(拉力)试验机: CMT4254, 深圳市新三思计量技术公司; 高阻计: ZC-36, 上海精科六表厂; 水平垂直燃烧测定仪: CZF-3, 江宁县分析仪器厂; 热变形维卡软化温度试验机: ZWK-300, 深圳市新三思计量技术公司; 熔体质量流动速率测定仪: MI-3, 德国高特福公司; 离子色谱: MIC, 瑞士万通公司; 同向双螺杆挤出机 TSE-65A, 南京瑞亚高聚物装备有限公司

1.3 性能测试
 1.3.1 氯含量的检测
 测试标准: 按照 EN14582-2007、IEC 61189-2006、IPC-IPM-650 标准进行
 测试方法: 将样品放置在一定的装置中进行燃烧, 并用一定的吸收液吸收, 吸收后的溶液定容后用 IC 离子色谱进行分析, 测定卤素含量。
 1.3.2 其他性能的检测
 密度: 按照 GB/T 1033.1—2008 标准进行; 拉伸性能: 按照 GB/T 1040.5—2008 标准进行; 体积电阻率和表面电阻率: 按照 GB/T 1410—2006 标准进行; 负荷变形温度: 按照 GB/T 1634.3—2004 标准进行; 悬臂梁冲击强度: 按照 GB/T 1843—2008 标准进行; 燃烧性能: 按照 GB/T 2408—2008 标准进行; 熔体质

改性增强材料的氯含量低, 其氯元素质量分数几乎都小于 900×10^{-6} 的限值。只要控制 PPS 树脂的氯含量, 即可有效控制 PPS 复合材料的氯含量。
 低氯 PPS 树脂材料生产流程: 将低氯 PPS 树脂
 低氯填 **co-rotating twin-screw extruding machine**
 材料, 充分利用其各自的优点, 制备出综合性能好的共混物, 从而得到低氯 PPS 复合改性材料。
 2 结果与讨论
 2.1 树脂的性能比较
 表 2 低氯 PPS 树脂的性能与常规 PPS 性能的对比
 Tab 2 **Nanjing Ruiya Extrusion Corporation**
 resin with the conventional ones

项目	PPS-hb	PPS-hb DL
Cl 元素质量分数/ 10^{-6}	2 400	823
熔体质量流动速率/ $g \cdot (10min)^{-1}$	326	353
密度/ $g \cdot cm^{-3}$	1.32	1.32

实验研制出的低氯 PPS 树脂 (PPS-hb DL) 与常规 PPS 树脂 (PPS-hb) 的性能比较如表 2。从表 2 中的性能对比可以看出, 低氯 PPS (PPS-hb DL) 与常规 PPS (PPS-hb) 的性能没有大的差异, 性能稳定。
 2.2 低氯 PPS 产品与常规产品性能对比
 表 3 低氯 PPS 玻纤增强材料产品与常规产品性能对比
 Tab 3 Performance comparison between the glass fiber reinforced

Source: <http://www.doc88.com/p-858246235005.html>

Truth About Lumena New Materials (00067.HK)

Comparing this information with Lumena's website, we can tell that the company also uses this extrusion machine.

Evidence 25 – TSE-65A at Deyang Chemical



Source: <http://en.chinapps.com/factory.aspx>

The production capacity of TSE-65A, a standardized machine, is 150-300kg per hour. Nanjing Ruiya Extrusion, the company that supplied this machine to Lumena, confirmed to us that TSE-65A's production capacity when used in PPS compounds is 200-250kg per hour.

Evidence 26 – TSE-65A specifications

Model	Diameter (mm)	L/D	Max speed (rpm)	Power (kw)	Torque (N.m)	T/A ³	Capacity (kg/h)
TSE20A	22	28-56	600	4	30	4.8	1-10
TSE35A	35	28-56	600	15	115	4.2	10-50
TSE50A	50	28-56	500	45	405	5.1	80-150
TSE65A	62	28-56	500	75	675	4.8	150-300
TSE75A	72	28-56	500	110	1005	4.6	300-550
TSE95A	92	28-56	400	250	2815	5.9	400-900
TSE135A	131	28-56	400	400	6190	4.6	900-1200

Source: <http://www.nj-guangda.com/english/proShow.aspx?id=111>

2.2.3. Estimating PPS compounds output

A customer who knows the company well has the following observations:

- There are six TSE-65A machines used for the production of PPS compounds, three of them have been idle for a long time; and
- The three machines in operation run for eight hours a day doing one shift, and they run in full load for no more than six hours a day.

Based on these observations, and assuming a capacity of 200kg per hour and 330 working days a year, we arrive at an output figure of 1,188 tons a year:

Truth About Lumena New Materials (00067.HK)

200kg per hour * 6 hours * 3 machines * 330 days = 1,188,000 kg or 1,188 tons per year

Lumena has exaggerated its PPS compounds output by more than 20 times!

2.3. Our estimates of PPS resin and final products actual output

Based on the above pieces of evidence and analysis, we believe Lumena's production of PPS resin amounted to about 5,000 tons, roughly 18% of what the company claimed. The usage of Na₂S should have amounted to 6,019 tons, implying a monthly consumption of 500 tons. Recall that Deyang Chemical's merchandizer has said that its demand for sodium sulfide is a few hundred tons a month.

With 5,000 tons of PPS resin, the company could probably sell 7,250 tons of final products. Of this, we have just demonstrated above that the company probably sold 1,188 tons of PPS compounds, about 4.3% of the amount reported. That leaves 6,062 tons of final products. Assume that the actual output of PPS fiber was half the reported number or 2,377 tons (recall that towards the end of the conversation in Evidence 17, Engineer 2 said output was two to three thousand tons). The remaining 3,682 tons were PPS resin, at about 48.4% of the amount claimed.

Estimate 1 – Estimated PPS final product breakdown			
(tons per year)	2012 reported	2012 estimated	ratio
PPS resin	7,614	3,685	48.3%
PPS compounds	27,608	1,188	4.3%
PPS fiber	4,754	2,377	50.0%
Total	39,976	7,250	18.1%

Source: Emerson Analytics

To summarize:

1. Lumena's total PPS resin output is probably less than 20% of the amount it claims, based on:
 - a. A merchandizing staff told our investigator that the company's demand for sodium sulfide, a key raw material, is only several hundred tons a month, which puts a ceiling on PPS resin output at no more than 10,000 tons;
 - b. An engineer at the PPS resin plant told a potential customer that annual output is 5,000-6,000 tons; and
 - c. Truck traffic count reveals a movement significantly below the volume needed.
2. Given an inflated PPS resin output number, the sales volume of Lumena's final products are necessarily exaggerated by five times in aggregate;
3. Among the three types of final products, Lumena chooses to magnify the sales volume of PPS compounds by more than 20 times:
 - a. We have identified the intrusion machine that Lumena uses for producing PPS compounds; and
 - b. We have established that it is running at very low capacity utilization ratio of about 4% as half of the six machines are left idle and the other half only used for one eight-hour shift daily.

Truth About Lumena New Materials (00067.HK)

Part 3. Exaggerated Profitability and Asset Black Holes

3.1. Exaggerated profitability

3.1.1. Revenue inflated by 7x

We have seen from the previous two sections that Lumena has exaggerated its thenardite and PPS output by roughly five times: among them medical thenardite was probably inflated by 200 times, and PPS compounds by 20 times.

We did not make detailed investigations into Lumena's unit prices. Giving the company the benefits of doubt, we have assumed that the unit prices achieved by the company were accurate. (Given that the company does not actually produce "specialty" thenardite, we assume all non-medical thenardite sells at the same price. This may result in a slight under-estimation because animal feed-grade thenardite is more expensive. As the volume involved is insignificant the overall impact is negligible). Still, our calculations show that the company probably inflated its 2012 sales by seven times.

Estimate 2 – Revenue estimate				
	Unit	Lumena claim	Our estimate	Remarks
Powder thenardite				
Revenue	Rmb m	53.4	53.4	
Sales volume	tons	203,941	203,941	
Unit price	Rmb/ton	262	262	
"Specialty" thenardite				
Revenue	Rmb m	649.9	26.2	
Sales volume	tons	1,201,530	100,000	Yuegou never operational, Guangji actual output less than 10% of claim
Unit price	Rmb/ton	541	262	No "specialty" thenardite, powder thenardite price is used instead
Medical thenardite				
Revenue	Rmb m	871.8	3.4	
Sales volume	tons	258,203	1,000	Dahongshan stopped medical thenardite years ago, Muma output about 1,000
Unit price	Rmb/ton	3,376	3,376	
PPS resin				
Revenue	Rmb m	508.6	246.2	
Sales volume	tons	7,614	3,685	Actual sales about 48% of claim
Unit price	Rmb/ton	66,803	66,803	
PPS compounds				
Revenue	Rmb m	1,991.1	85.7	
Sales volume	tons	27,608	1,188	Evidence suggests actual sales about 4% of claim
Unit price	Rmb/ton	72,121	72,121	
PPS fiber				
Revenue	Rmb m	432.6	216.3	
Sales volume	tons	4,754	2,377	Evidence suggests actual sales about half of company claim
Unit price	Rmb/ton	91,001	91,001	
Total revenue	Rmb m	4,507.5	631.2	Total revenue inflated by 7x

Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

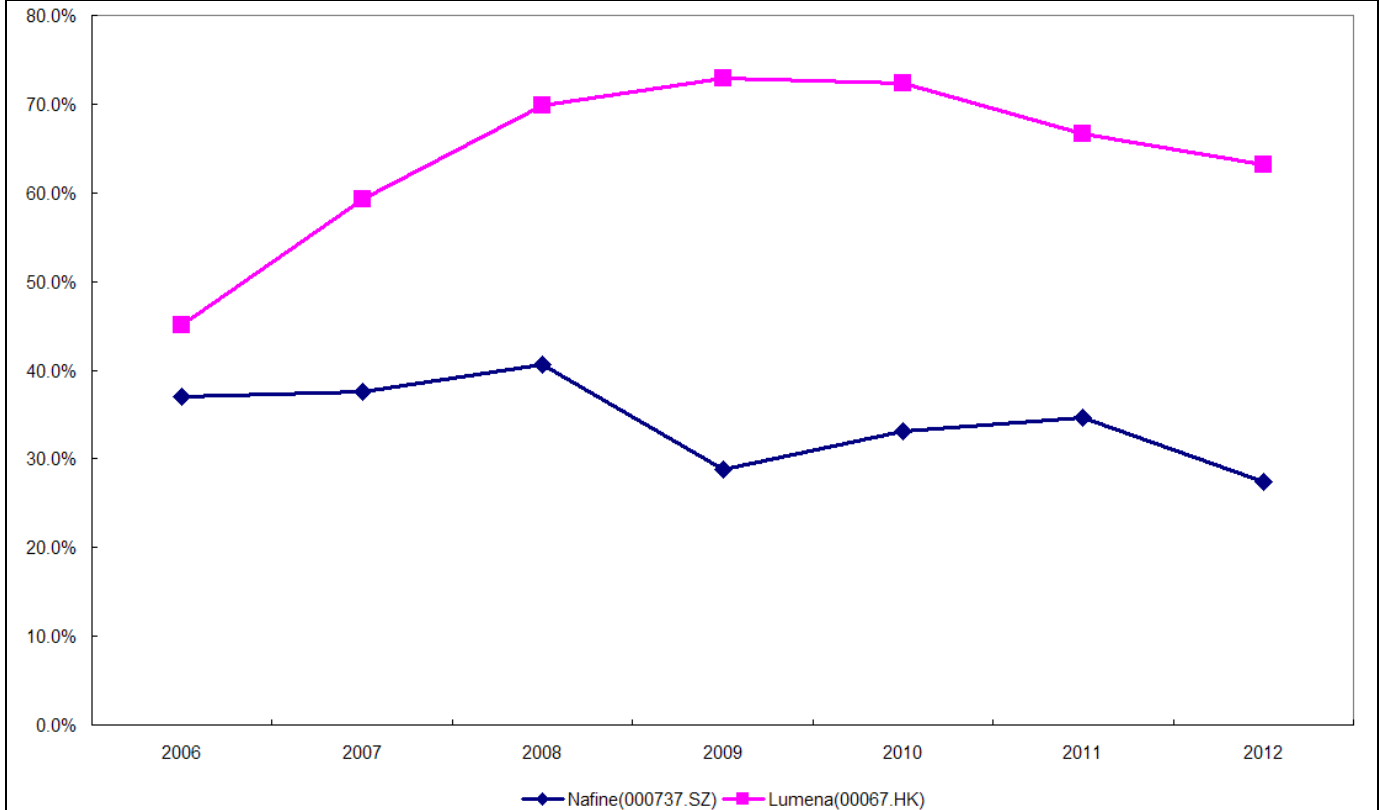
3.1.2. Exceptionally high gross margins

Lumena has not only been exaggerating its sales volume and therefore revenue, it has also been fabricating its gross margins, thus leading to hugely inflated profitability. This is evident when comparing the gross margins that the company claims with those reported by its competitors. An important point to bear in mind is that Lumena does not really have any exclusive technology or unique know-how that enables it to command exceptionally high gross margins.

The Shenzhen-listed Nafine Group International (000737.SZ), is a major competitor of Lumena in the thenardite market. As we can see from the following line chart, Nafine's gross margins have held relatively stable around the 30% level. In 2006, the first year that Lumena makes its financial numbers public, it achieved 45.1% gross margin, moderately higher than Nafine's 37.0%. In subsequent years, however, the gap between the two widened significantly. By 2009, Lumena's gross margin peaked at a reported 72.9%, 1.5x better than the 28.8% achieved by Nafine. In the last three years, while Lumena experienced a squeeze in its gross margin, it remained twice the level achieved by Nafine.

Generally speaking, for a common commodity such as thenardite, it is extremely unlikely that one manufacturer can consistently achieve a gross margin that is far superior to those enjoyed by its rivals. We believe we are being generous in assuming that Lumena can achieve similar gross margins as Nafine.

Evidence 27 – Gross margins of thenardite manufacturers



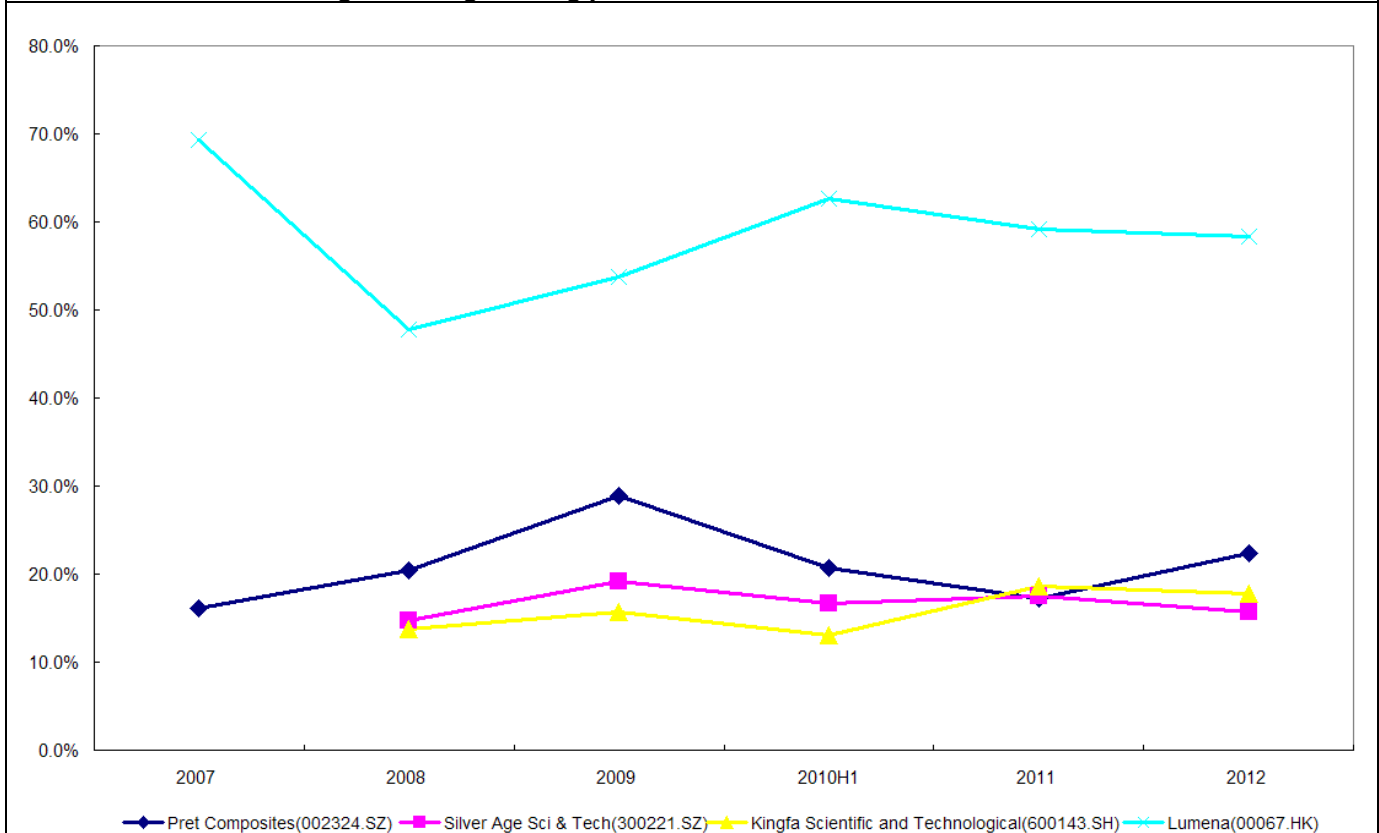
Source: Emerson Analytics

As for the PPS business, there is no pure PPS manufacturer listed in China or anywhere else to provide a direct comparison of gross margins. However, we can observe the gross margins of other engineering plastics, of which PPS is one. It is reasonable to assume that engineering plastics command similar gross margins.

Truth About Lumena New Materials (00067.HK)

In the Chinese A-share market, there are three listed engineering plastics manufacturers. As can be seen from the following chart, the gross margins of these three companies are significantly lower than those of Lumena, and they tend to move within the 15-25% range most of the time. In addition, they tend to move in the same direction most of the time.

Evidence 28 – Gross margins of engineering plastics manufacturers



Source: Emerson Analytics

It is hard to believe that Lumena should have gross margins of more than 50% on a sustained basis in its PPS business.

3.1.3. Lumena probably lost Rmb372m rather than earned Rmb1,394m

So, if Lumena has inflated its revenue by 7x, and exaggerated its gross margins to more than double the actual levels, could it still be making money?

We believe the company actually lost Rmb372m in 2012 rather than made a profit of Rmb1,394m.

Our calculations are based on the following assumptions and treatments:

- we assume a 28% gross margin for the thenardite business and a 25% gross margin for the PPS business, as demonstrated above;
- we assume that other expenses (selling and marketing, overhead, finance charges, etc) in the 2012 annual report were more or less correct;
- we ignore the one-time provision of Rmb131m arising from the early redemption of its fixed-rate senior notes;
- we also ignore the Rmb342m impairment loss on the Guangji facility; and
- there was no profit tax in 2012 as there was no taxable profit.

Truth About Lumena New Materials (00067.HK)

Estimate 3 – Estimated recurring profit	
Year end Dec 31	
<i>Rmb m</i>	<i>2012</i>
Revenue	631.2
Gross profit	160.3
Other revenue and gains	81.0
Selling and distribution expenses	-14.4
Other operating expenses	-435.6
Finance costs	-163.6
Profit before tax	-372.3
Income tax	0.0
Net Profit	-372.3

Source: Emerson Analytics

3.2. Asset black holes

With an exaggerated profit, the sanctity of Lumena's balance sheet is naturally questionable. Here we do detect three major asset black holes.

3.2.1. What “Assets under Construction”?

An outrageous lie perpetuated by Lumena's controllers centers around a curious “assets under construction” entry that debuted in its 2011 fixed assets account. In two years, this entry ballooned to become an Rmb3.48bn black hole!

3.2.1.1. Repeated delays in expansion completion

When it acquired its PPS business in late 2010, Lumena said it would expand its PPS resin capacity by 25,000 tons and PPS fiber capacity by 15,000 tons by the end of 2012. In the 2011 annual report, the company calls the “on-going” expansion Phase I project, and adds a further 25,000-ton PPS resin plant in the so-called Phase II project for completion at the end of 2013.

However, the expansions have fallen behind schedule and completion delayed repeatedly. Given that Lumena's real utilization rate of PPS facilities is rather low, we are not even sure if the company is in a position to complete the expansion.

Let us look at the phase one expansion step by step, chronologically, underlined in red in the following exhibit.

- 1、 Lumena said that it would complete PPS expansion in 2012 at the time of the PPS acquisition announcement on December 14, 2010.
- 2、 In p.17 of its 2011 interim report, Lumena claims that it has already started construction, and maintains that completion is still scheduled for late 2012.
- 3、 Again, in p.18 of its 2011 annual report, Lumena reiterates that the expansion is still scheduled for completion in late 2012, by which time there would be a total of 55,000 tons of resin capacity and 20,000 tons of fiber capacity.
- 4、 Then, in p.13 of its 2012 interim report, Lumena reveals that completion of the expansion has been postponed to early 2013.
- 5、 A few months later, in its 2012 annual report, Lumena further pushes back the Phase I completion schedule to the second half of 2013.

Truth About Lumena New Materials (00067.HK)

6、 Another five months went by, and the completion schedule of Phase I was subtly moved to 4Q2013 instead of 2H2013.

Company Information 13 – Lumena disclosures on PPS expansions

The Company intends to start the construction of the PPS resin plant in April 2011 and to start production in October 2012. Together with the existing production capacity of 30,000 metric tons, the Board believes that the Target Group's PPS resin production capacity will reach 36,250 metric tons in 2012 and 55,000 metric tons in 2013 and 2014.

The Company intends to start construction of the PPS fibre plant in October 2011 and to start production in 2012. Together with the existing production capacity of 5,000 metric tons, the Board believes that the Target Group's PPS fibre production capacity will reach 7,500 metric tons in 2012 and 20,000 metric tons in 2013 and 2014.

Source: Lumena acquisition document p.64, dated Dec 14, 2010

To meet the rapidly growing market demands, we commenced the expansion of PPS resin production line and PPS fibre production line during the year. Through increasing the production capacity, we can promptly respond to the emerging market opportunities. The PPS expansion construction will be completed in phases. The phase one construction of resin production line and fibre production line is expected to complete by the end of 2012, at which time our annual production capacities of PPS resin and PPS fibre could reach 55,000 tpa and 20,000 tpa, respectively. We are commencing the phase two construction of resin production line and it is expected to complete in the second half of 2013, at which time our annual production capacity of PPS resin will be further increased by 25,000 tpa.

Source: Lumena 2011 annual report, p.18

The Group anticipates that the PRC will raise the standards for environment-related materials and industrial production facilities that are related to the environment. In view of this, the Group will further enhance the industrial standards of its production lines under planning, and also ensure that its production facilities meet safety requirements. In the construction of the new production lines, the Group has made some adjustments in certain technical parameters to satisfy the new requirements. As a result, the operation of the new PPS production lines has been delayed. It is expected that the new PPS resin production line with production capacity of 25,000 tonnes per annum ("tpa") and the PPS fibre production line with production capacity of 15,000 tpa will commence production in the second half of 2013. Furthermore, the construction of the second phase of the PPS resin production line has commenced. The Group anticipates that the completion and operation of the new production line will meet the growing demands for PPS in the PRC and in the rest of the world, and further consolidate our leading position in the industry.

Source: Lumena 2012 annual report, p.13

In the first half of 2011, we have commenced the construction of a PPS resin production line of 25,000 tpa and a PPS fibre production line of 15,000 tpa, with both production lines being expected to commence operation in the fourth quarter of 2012. Together with our existing PPS resin production capacity of 30,000 tpa, our annual effective PPS resin production capacity will reach 36,250 tonnes in 2012 and will reach 55,000 tonnes on neat resin basis in 2013. Together with our existing PPS fibre production capacity of 5,000 tpa, our annual effective PPS fibre production capacity will reach 7,500 tonnes in 2012 and will reach 20,000 tonnes in 2013.

Source: Lumena 2011 interim report, p.17

Our PPS manufacturing bases are respectively located in Deyang City and Shuangliu County, Sichuan Province. As to the plant based in Deyang City, there are two PPS resin production lines with a combined production capacity of 24,000 tpa (on neat resin basis) and PPS fibre production line with a production capacity of 5,000 tpa. As for the plant based in Shuangliu County, the production capacities of its PPS resin production line and PPS compounds production line are 6,000 tpa (on neat resin basis) and 30,000 tpa, respectively. Last year, the Group started construction of a PPS resin production line with production capacity of 25,000 tpa and a PPS fibre production line with production capacity of 15,000 tpa. Upon commencing production of this first phase of production line construction scheduled by early 2013, the Group will have a PPS resin production capacity of 55,000 tpa and a PPS fibre production capacity of 20,000 tpa.

Source: Lumena 2012 interim report, p.13

Our PPS manufacturing bases are respectively located in Deyang City and Shuangliu County, Sichuan Province. For the plant based in Deyang City, there are currently two PPS resin production lines with a combined production capacity of 24,000 tpa (on neat resin basis) and a PPS fibre production line with a production capacity of 5,000 tpa. As for the plant based in Shuangliu County, the production capacities of its PPS resin production line and PPS compounds production line are 6,000 tpa (on neat resin basis) and 30,000 tpa, respectively. Besides, two new production lines of the Group will be completed and put into trial production in the fourth quarter of the year. It is expected that upon commencement of production of the new production lines, the Group's PPS resin production capacity can be raised to 55,000 tpa while PPS fibre production capacity can be increased to 20,000 tpa, which will help to satisfy the increasing demand for PPS in the PRC and other regions.

Source: Lumena 2013 interim report, p.13

So, what is really happening to Lumena's PPS expansion projects?

We visited the PPS expansion plants in Deyang City several times in the last few months. As shown in the following photograph, there were a few buildings on a huge plot of land.

Evidence 29 – Lumena's new PPS resin plant on a huge plot of land



Source: Emerson Analytics

Truth About Lumena New Materials (00067.HK)

These new PPS resin buildings were still vacant in December 2013, as shown in the following photograph. We returned to the site recently, and failed to detect any machinery/equipment being installed inside the plant.

Evidence 30 – Inside Lumena’s new PPS resin plant



Source: Emerson Analytics

We understand that Lumena’s executives have told investors recently that trial production of the 25,000-ton PPS resin plant will be further postponed to June 2014. Based on the above evidence, do you still want to believe in their lies?

According to Lumena’s production figures, its PPS resin capacity utilization rate was 91.9% in 2012 and 96.4% in 1H2013. Repeated delays in its expansion projects are a telling sign that capacity utilization is not as high as reported.

3.2.1.2. Accounting for the expansion

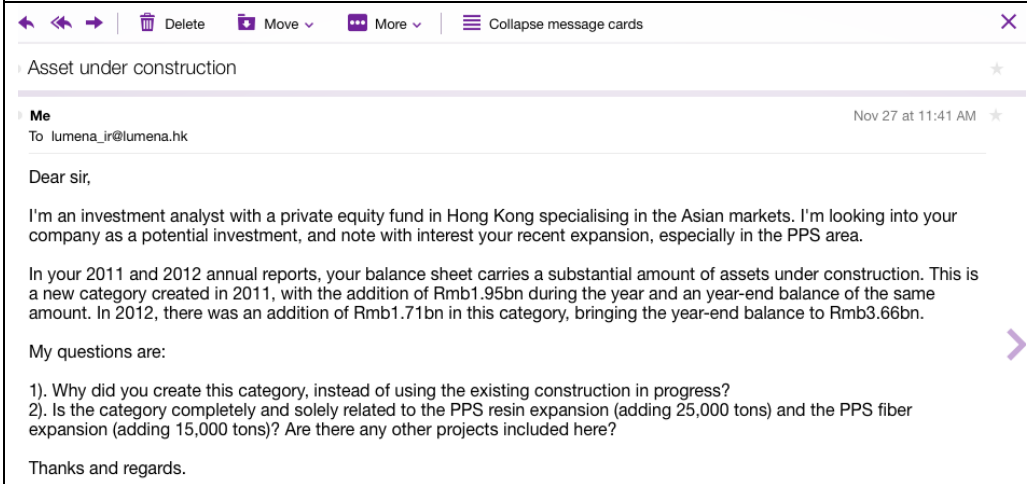
The item “assets under construction” first appeared in the 2011 annual report just after Lumena acquired the PPS operations. This item is distinct from another similar item termed “construction in progress” which existed in previous years and has continued to exist.

During 2011, the company had intended to acquire the Yinglin mirabilite mine (for the production of thenardite) for Rmb320. The announcement was made in June 2011 but the deal was cancelled next March. Otherwise, Lumena has not announced any other major capital investment projects. It is therefore reasonable to assume that “assets under construction” refers only to the PPS expansion.

We asked Lumena on November 27, 2013 to confirm that “assets under construction” were entirely and solely related to the PPS expansion. There has been no response from Lumena’s investor relations department.

Truth About Lumena New Materials (00067.HK)

Evidence 31 – Email to Lumena IR dated November 27, 2013



Source: Emerson Analytics

3.2.1.3. Almost Rmb2bn of assets before construction began

Outside the new PPS resin plant during the summer of 2013, a billboard summarized the key points of the civil engineering work. Despite the company's claim in its 2011 interim report that work had begun, the billboard (pictured below) clearly showed that construction was to begin on May 21, 2012 and to conclude on December 16, 2012.

Evidence 32 – Billboard outside Lumena's new PPS resin plant

工程概况

工程名称	25KT聚苯硫醚(PPS)纤维级树脂规模化项目及25KT聚苯硫醚(PPS)注塑级树脂规模化项目		
建设单位	四川德阳特种新材料有限公司	基础形式	独立柱基础
设计单位	四川天一科技股份有限公司	结构类型	框架结构
地勘单位	核工业德阳金岩工程有限公司	质量目标	合格
质监单位	德阳市建设工程质量安全监督站	安全目标	无重大安全事故
安监单位	德阳市建设工程质量安全监督站	建筑面积	约8万m ²
监理单位	四川宏创建设管理有限责任公司	开工时间	2012年5月21日
施工单位	四川省建筑机械化工程公司	竣工时间	2012年12月6日
《施工许可证》批准文号			

Owner: Sichuan Deyang Special New Materials Co Ltd

Gross floor area: About 80,000 square meter

Construction begins: May 21, 2012

Construction ends: Dec 6, 2012

Source: Emerson Analytics

In the following photograph, Evidence 33, work on the PPS fiber plant was to begin on April 16, 2013 and to conclude on September 16, 2013.

Truth About Lumena New Materials (00067.HK)

Evidence 33 – Construction permit inside Lumena's new PPS fiber plant

建设单位	四川德阳特种新材料有限公司	
工程名称	15kt/a聚苯醚(PPS)纤维规模化项目厂房及后道工序	
建设地址	德阳市金沙江西路728号	
建设规模	面积: 20667.15 (m ²)	跨度(高度) (m)
合同价格	2067.06 万元	
勘察单位	核工业德阳岩土工程有限公司	
设计单位	成都军区建筑设计院	
监理单位	四川宏创建设管理有限责任公司	
施工单位	四川德达建设有限公司	
专业分包单位		
劳务分包单位	王泽峰	
项目总监	冯习根	专业监理工程师 戚知来, 赵国强
项目负责人	罗开炎	执业资格 川25100080554
项目技术负责人	李绍彬	
合同开工日期	2013-04-15	安全负责人
		合同竣工日期
		2013-09-16

Owner: Sichuan Deyang Special New Materials Co Ltd

Name of project: 15,000-ton PPS fiber expansion project plant

Size of construction: 20,667.15 square meter

Contract value: Rmb20.6706m

Construction begins: Apr 15, 2013

Construction ends: Sept 16, 2013

Construction permit

Source: Emerson Analytics

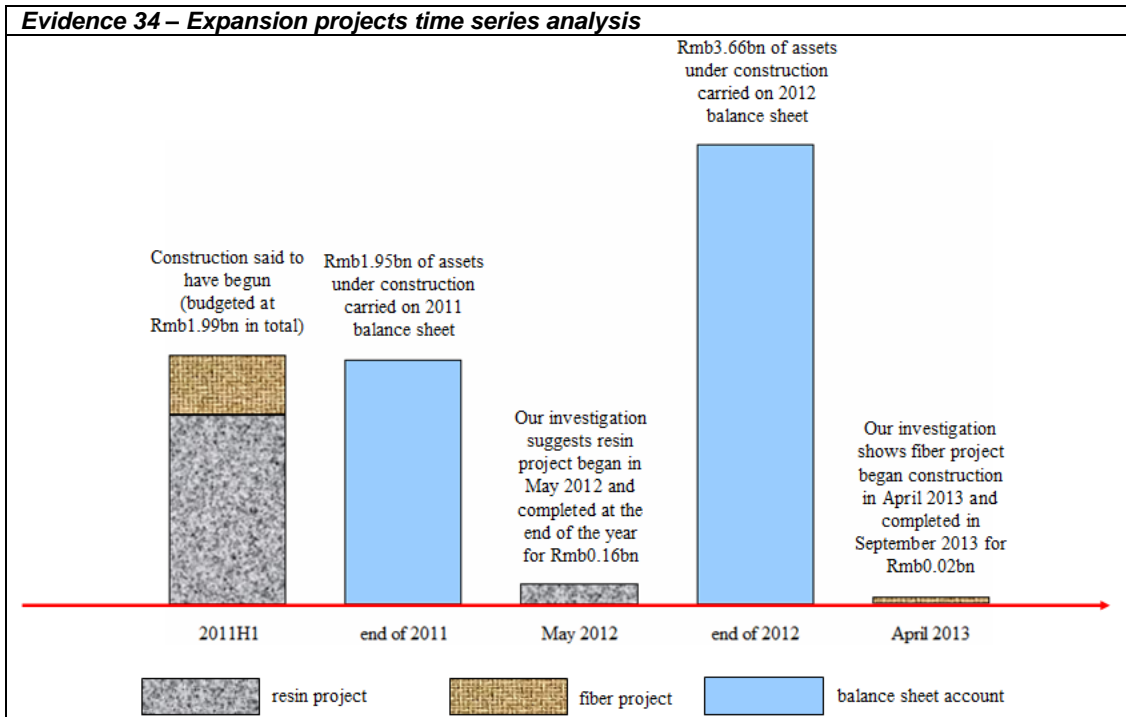
We checked with the contractor and confirmed that the actual construction work proceeded according to the schedule. There was no construction work before the permit was issued.

According to p.64 of the Lumena [PPS acquisition document](#) dated December 14, 2010, the capital expenditure on the PPS resin facility is expected to total Rmb1.51bn (with Rmb706m budgeted for 2011 and Rmb806m in 2012). Capex on the fiber facility is expected to total Rmb480m (Rmb120m for 2012 and Rmb360m for 2013).

Lumena recorded Rmb1.95bn of “assets under construction” during 2011 ([annual report](#) p.97) and another Rmb1.71bn in 2012 ([annual report](#) p.100).

Evidence 34 graphically depicts the progress of Lumena's PPS expansion.

Truth About Lumena New Materials (00067.HK)



Is it reasonable that capex for the projects inflated by 84% from Rmb1.99bn to Rmb3.66bn in two years? And if they had increased the budget they should have alerted shareholders of the huge cost overrun!

How can you accord a value of almost Rmb2bn to a fixed asset that has not even begun to be built?

Could “assets under construction” include deposits and prepayments for machinery and equipment to be bought?

NO!

Because “deposits and prepayments” are not included in “assets under construction”, but separately treated in note 22 to the accounts.

Company Information 14 – Note 22 to the accounts

22. DEPOSITS AND PREPAYMENTS – GROUP

Deposits paid for:

- Property, plant and equipment
- Others

Source: Lumena

Truth About Lumena New Materials (00067.HK)

3.2.1.4. Rmb3.48bn of black hole “under construction”

After Lumena booked Rmb1.95bn of “assets under construction” in 2011 without doing any construction work, it managed to complete several vacant buildings in 2012 and then claimed a value of Rmb3.66bn, without any machinery or equipment. How big is this black hole?

The contractor of the resin plant told our investigator that the entire contract was worth Rmb160m. To protect the identity of the contractor, we are not making this audio clip public. We are, however, sharing this information with SFC.

The following is a partial transcript of the conversation between the contractor and our investigator.

Evidence 35 – English Transcript of audio clip of contractor on Lumena’s new PPS resin plant

Emerson investigator: Well, so, that project ... it’s already completed, right?
Contractor: Completed. I’d handed it over to them.
Emerson investigator: Oh, handed over, right?
Contractor: Yes.
Emerson investigator: This project ... how long did it take?
Contractor: Well, about six months. Six months.
Emerson investigator: Six months, right?
Contractor: Yes.
Emerson investigator: That project, how much was the investment?
Contractor: Probably ... around ... including the civil engineering work and the construction ... about Rmb160m or so.
Emerson investigator: Oh, with site completion. It also includes machineries, right?
Contractor: Not including machineries, not including machineries. It included civil engineering work, installation of water and electricity supplies, fire safety, and completion work, all included.
Emerson investigator: So, not including the machines, everything else, the investment was Rmb160m.
Contractor: Yes, all inclusive.
Emerson investigator: Oh, all inclusive.
Contractor: Yes, and I completed everything for them.
Emerson investigator: Oh, all inclusive, and you completed it all.
Contractor: Yes.
Emerson investigator: So were you the main contractor?
Contractor: Yes, I was the main contractor.
Emerson investigator: How ... big was that building?
Contractor: Area ... was about 80,000 square meters.
Emerson investigator: Gross floor area or site area?
Contractor: Gross floor area. The site was about ... about 300-odd mu. *(Note: one mu equals 666.67 square meters)*
Emerson investigator: So the new plant is on a site of 300 something mu?
Contractor: Yes.
Emerson investigator: 300 something mu. They still have something not yet built, right?
Contractor: That’s a very small auxiliary building.
Emerson investigator: Oh, auxiliary.

Source: Emerson Analytics

The total value for the construction of fiber project 20,667 square-meter building was set out as Rmb20.67m (see evidence 33 above), which works out to about Rmb1,000 per square meter, a very reasonable price for a simple concrete building in inland China.

Thus, we have several buildings worth Rmb180m in total .Where’s the remaining Rmb3.48bn?

Truth About Lumena New Materials (00067.HK)

3.2.2. Lumena's reported cash balances are bogus

At the end of 2012, Lumena had cash balance of nearly Rmb3.30bn (including Rmb34m of pledged deposits), up from Rmb2.85bn at the interim stage and Rmb2.78bn at the end of 2011. This suggests that the company was able to maintain a relatively stable cash balance during the year.

However, note 8 to the accounts in p.90 of the [2012 annual report](#) shows that Lumena managed to earn merely Rmb16.78m in bank interest income during the year. This implies a yield of just 0.55% on its average cash balance. Such a return is only marginally higher than the 0.42% demand deposit rate set by the People's Bank of China, the central bank, and a long way below the 1.42% seven-day call deposit rate. Lumena's cash balances are either fakes or temporary window dressing.

Assuming that one placed half of one's money in savings account and half in three-month deposits, the average interest rate earned in 2012 would have been 1.63%. Based on this, we can deduce that the company's average cash was about Rmb1.03bn. This suggests that probably Rmb2bn of cash did not exist.

3.2.3. Goodwill and other intangible assets unjustified

According to note 19 to the accounts in p.103 of the 2012 annual report, Lumena had goodwill of Rmb5.75bn, almost entirely attributable to the acquisition of the PPS business. Note 21 in p.105 shows other intangible assets such as trademark, patents and technical know-hows and customer relationship totaling Rmb1.02bn, the bulk of which is also attributable to the PPS acquisition.

Obviously, these items will be excluded in assessing the company's tangible assets. Further, due to the serious falsification of accounts, it is clear that the goodwill and other intangible assets are not bringing any economic benefits to the company. They should be written off completely, all Rmb6.77bn of them.

3.2.4. Best estimates of net tangible assets

Taking the Rmb14.63bn of shareholders' equity at face value, we will need to make at least three big adjustments regarding "assets under construction", cash balance, and goodwill and other intangible assets.

As shown in the following table, this leaves shareholders with Rmb2.38bn in tangible assets, at most, or about a fifth of the reported value.

Estimate 4 – Net tangible assets estimate	
Lumena's 2012 net book value (Rmb m)	14,632
<i>Deductions:</i>	
Black hole of "assets under construction"	3,484
Non-existent cash	2,000
Write-off of goodwill and other intangibles	6,767
Net tangible assets	2,381
NTA per share	0.423
NTA as % of NBV	16.3%

Source: Emerson Analytics